

MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad,
Mining, Contracting, Engineering, Building, and General
Business Interests of the South and Southwest

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In This Issue:

Development Through Irrigation in
Lower Pecos and Toyah Valleys,
Texas.

Southern Mineral Resources to Be
Featured at the Appalachian
Exposition.

The Great Reservoir for the Ensley
Plant of the Tennessee Coal, Iron
and Railroad Company.

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BALTIMORE, JULY 20, 1911

B. t. u.**THE MEASURE OF HEAT**

The term British thermal unit (abbreviated B. t. u.), often confronts the user of coal.

As a yard stick is a measure of length, a B. t. u. is a measure of heat. The total amount of heat contained in a pound of fuel, all of which is liberated by complete combustion, is expressed in B. t. u.'s. A single heat unit is the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit at atmospheric temperature. Heat units make steam and steam makes power.

Below are tabulated, from some of the highest scientific authorities, the heat values of the commoner combustibles contained in coal:

SUBSTANCE	B. t. u. Per Lb.
Acetylene Gas	21,465
Marsh Gas	23,515
Olefiant Gas	21,345
Hydrogen Gas	62,035
Carbon	14,450

Included in the "Volatile Matter" of proximate analysis.

"Fixed Carbon" of proximate analysis.

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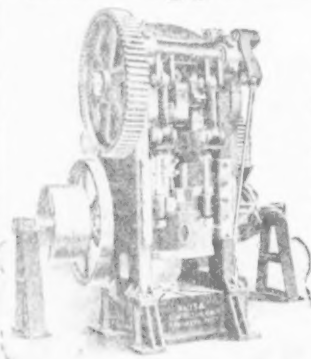
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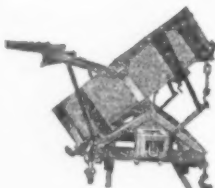
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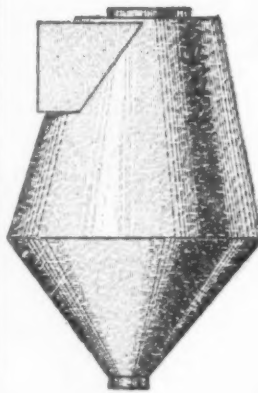
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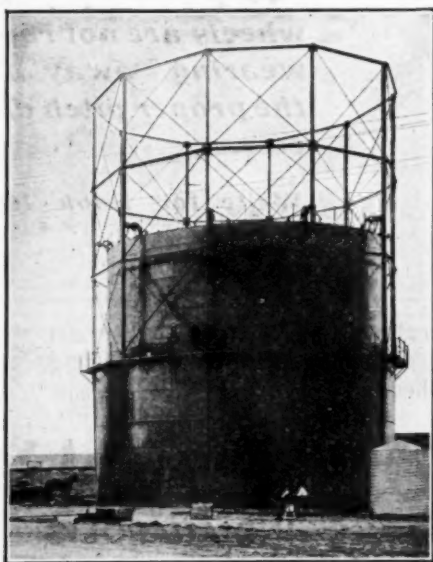
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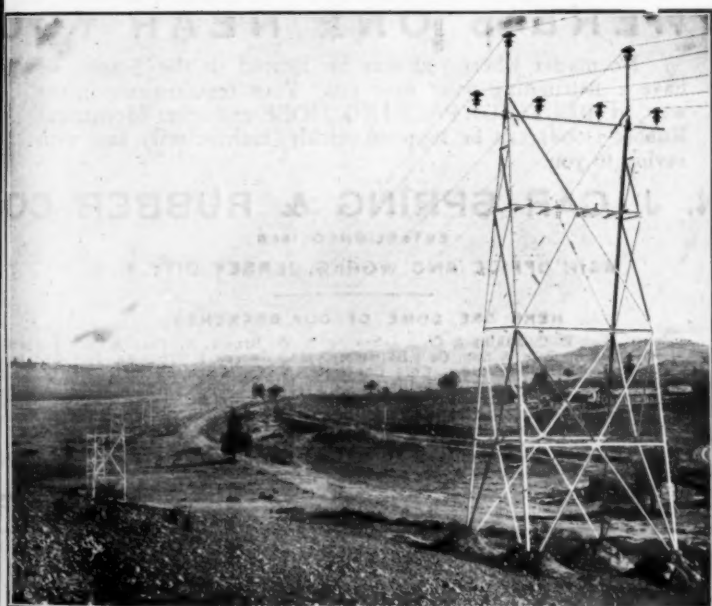
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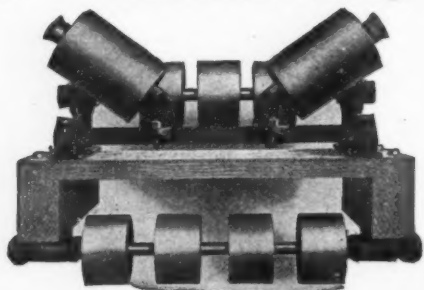
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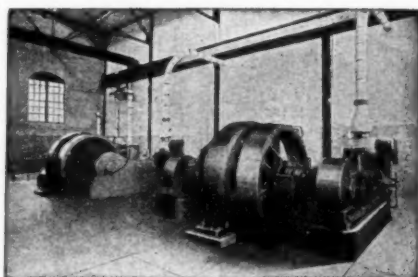
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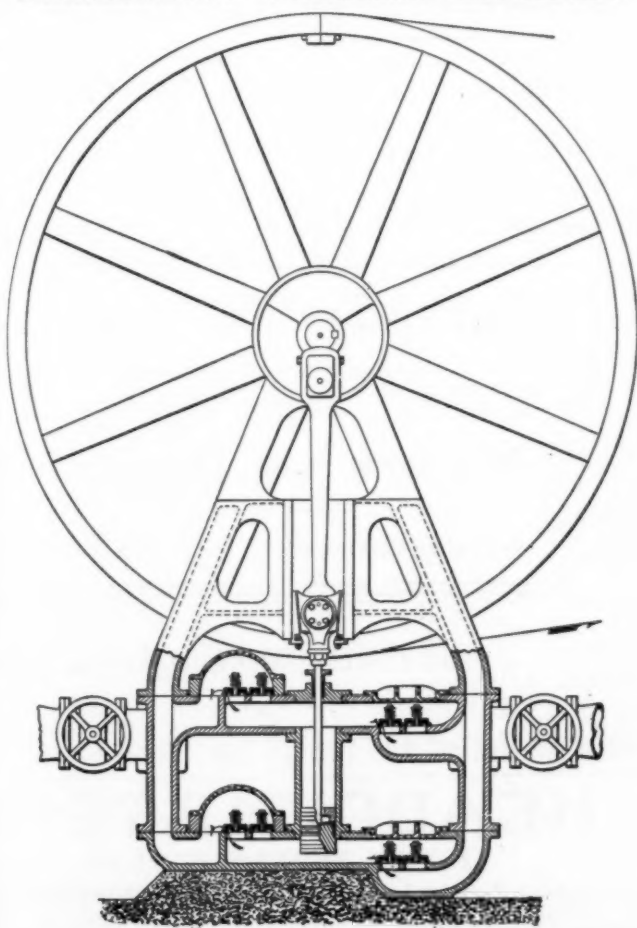
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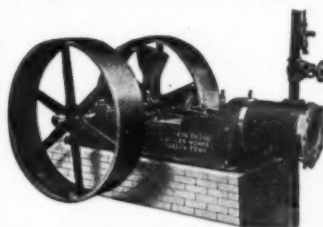
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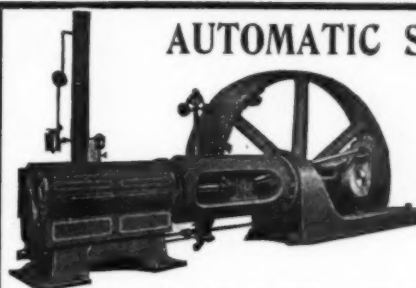
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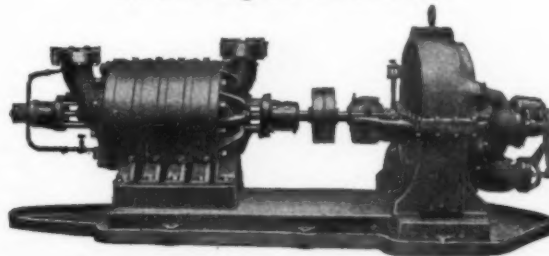
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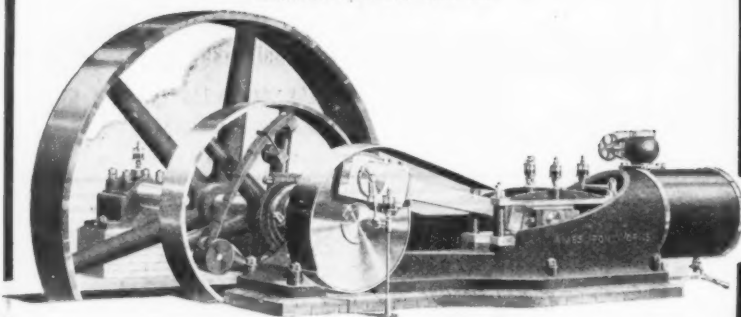
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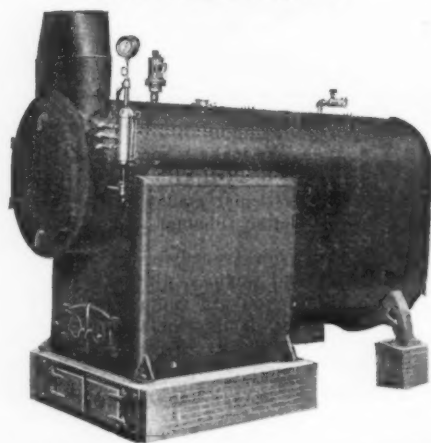
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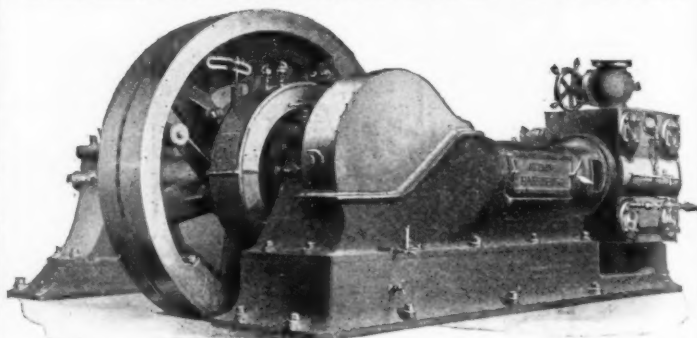
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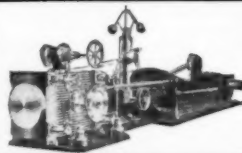
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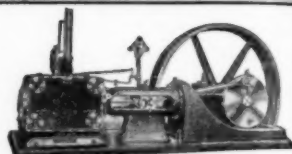
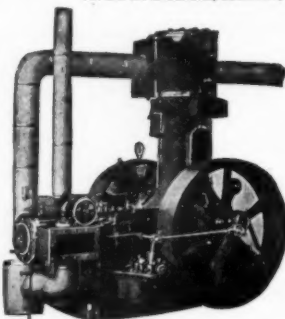


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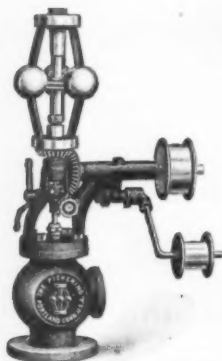
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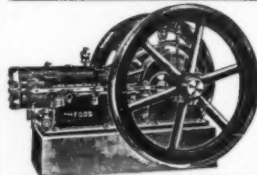
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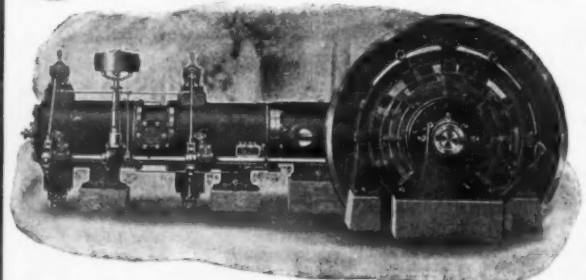
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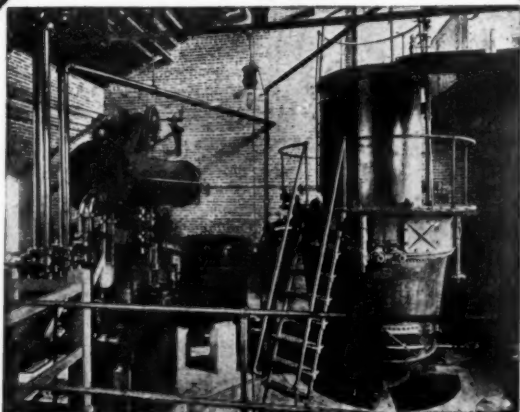
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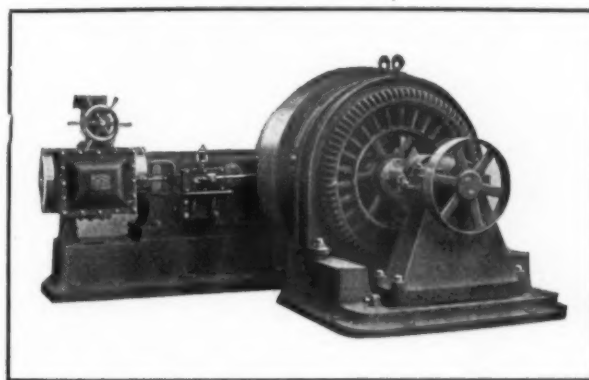
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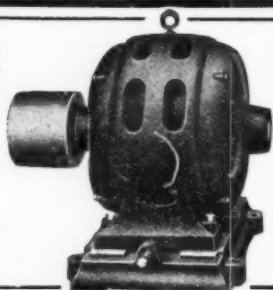
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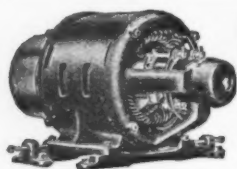
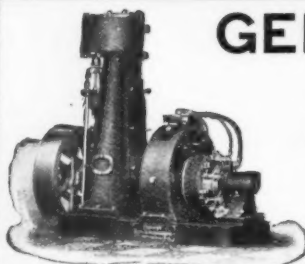
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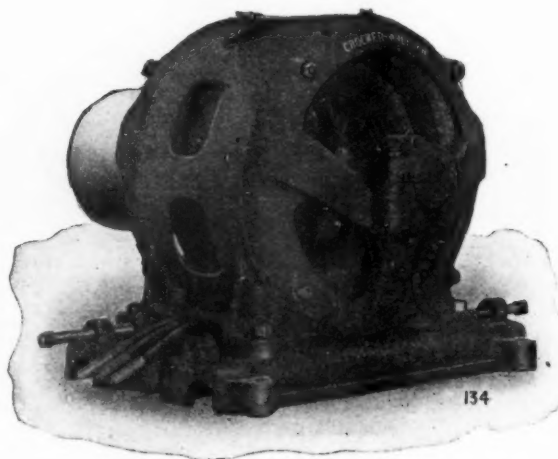
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Write for bulletin 126-J.

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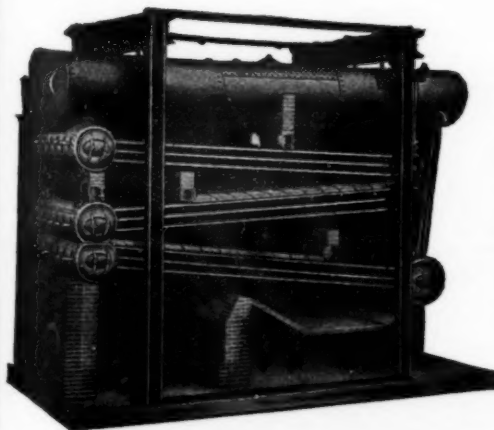
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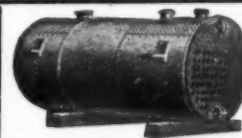
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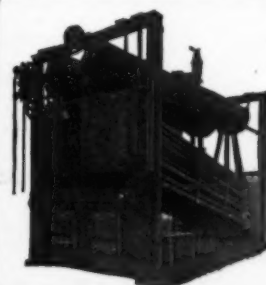
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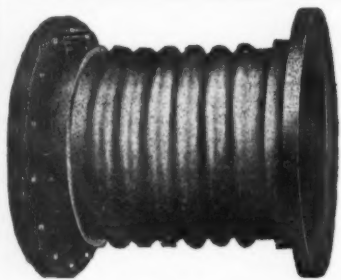
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Yours truly,

WEST YELLOW PINE COMPANY

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Please ship us as quickly as possible a duplicate of our recent order for grate bars.

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We will appreciate quick shipment.

Yours truly,

WEST YELLOW PINE COMPANY

Olympia, Ga., July 20, 1910

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Kindly ship us as early as possible:-

56 Thomas Elliptic Grate Bars 4' 1" long.

These bars continue to give us satisfactory service and we are placing this order with you in order to equip our 10 boilers throughout with these bars.

Yours truly,

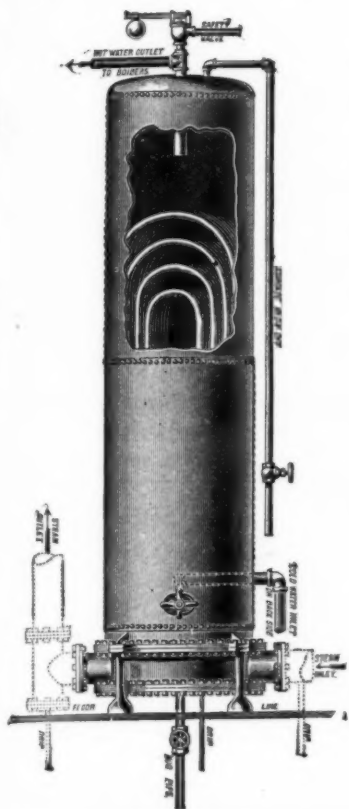
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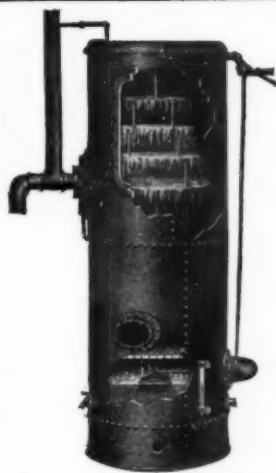
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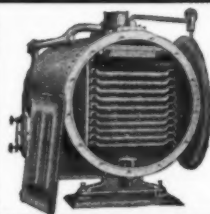
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Is guaranteed to deliver the water to the boiler at boiling temperature (210 to 212 degrees). It will also extract the oil from the exhaust, so that the steam after passing through the heater may be used for other heating purposes and the condensed water returned to the boiler without any additional elimination.

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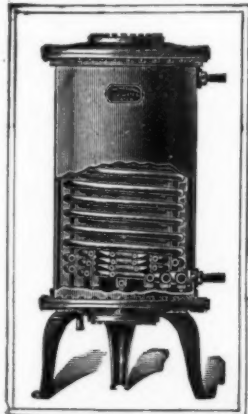
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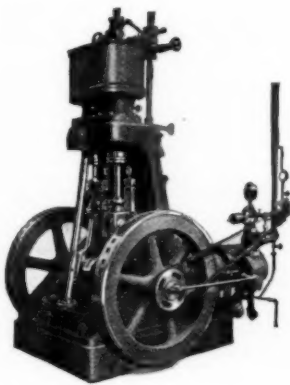
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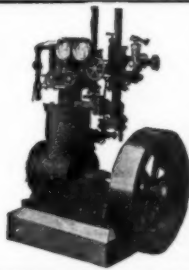
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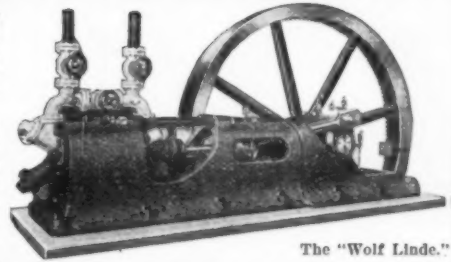
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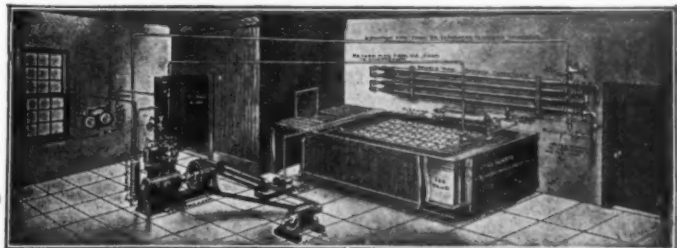
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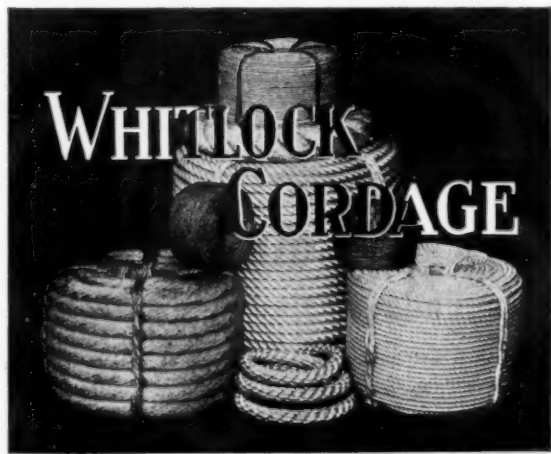
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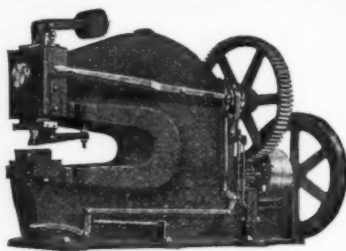
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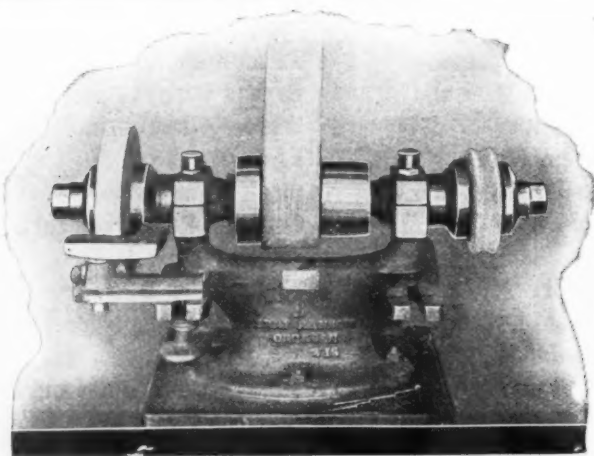
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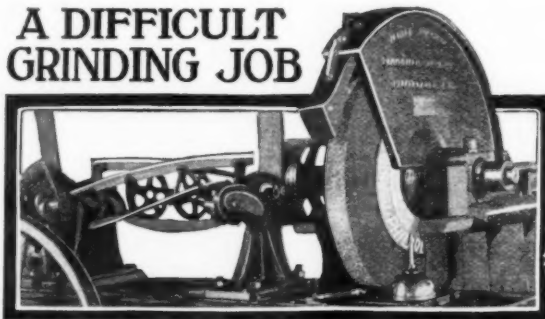
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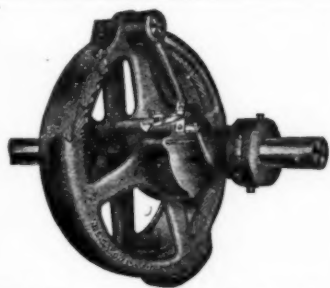
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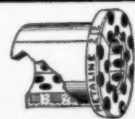
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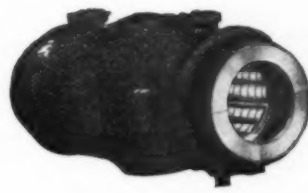
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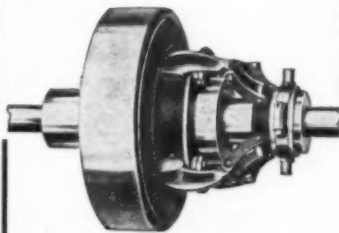
"In reply I beg to say that about four or five years ago, we tested some Hyatt roller bearings in some places in our mill that had been giving us a great deal of trouble, and where the strain on the bearings was very great. We were so pleased with the test that since that time we have not bought a hanger bearing of any other kind, and now we have two silk mills, one cotton mill, and a large addition to a second cotton mill fully equipped with Hyatt roller bearings."

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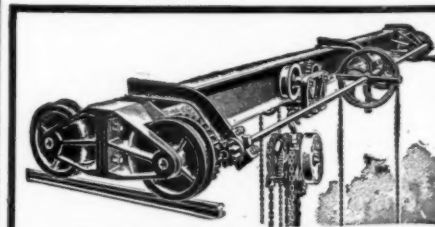
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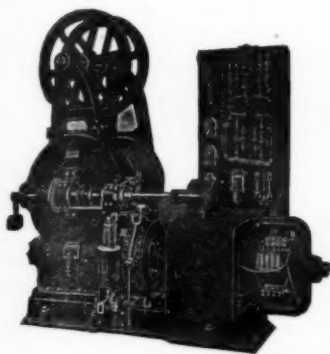
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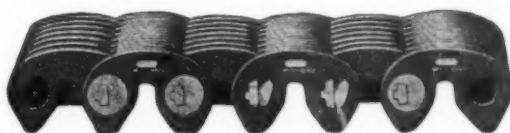
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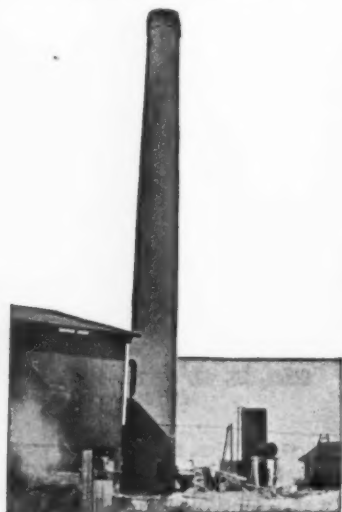
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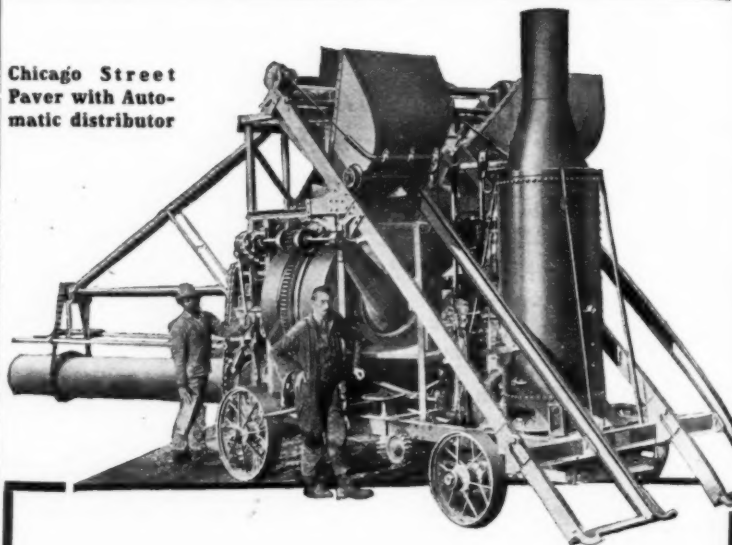
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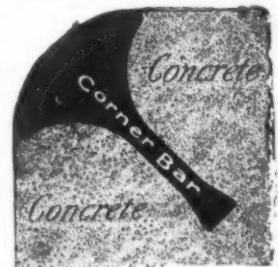
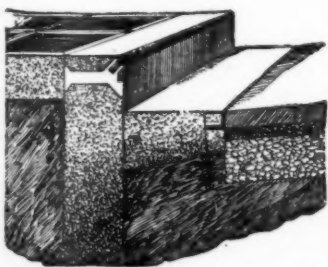
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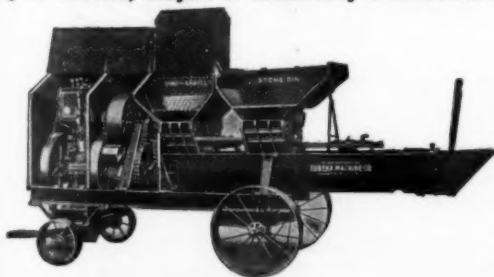
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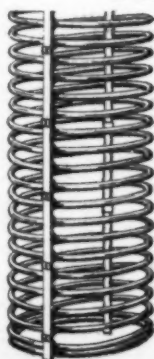
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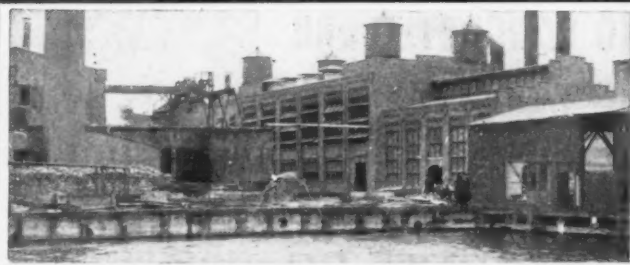
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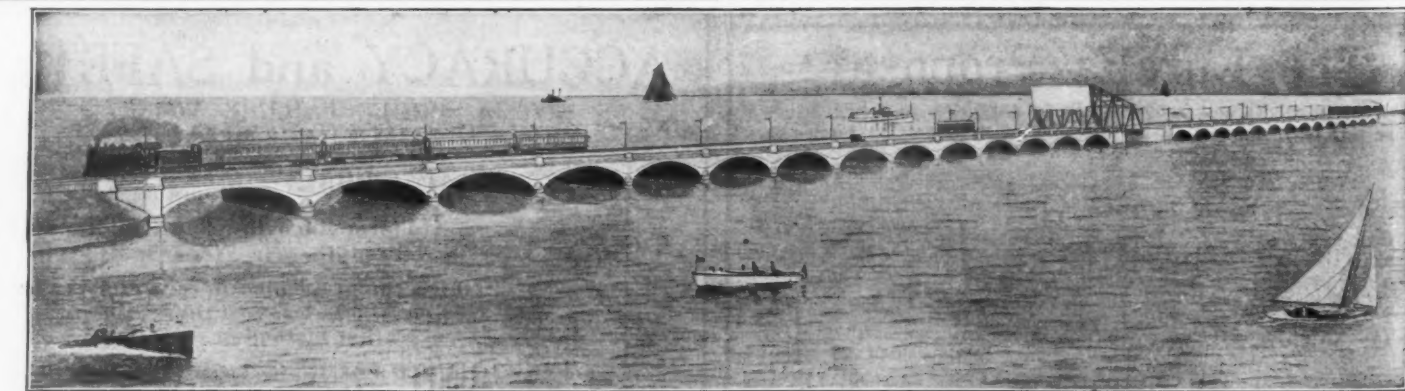
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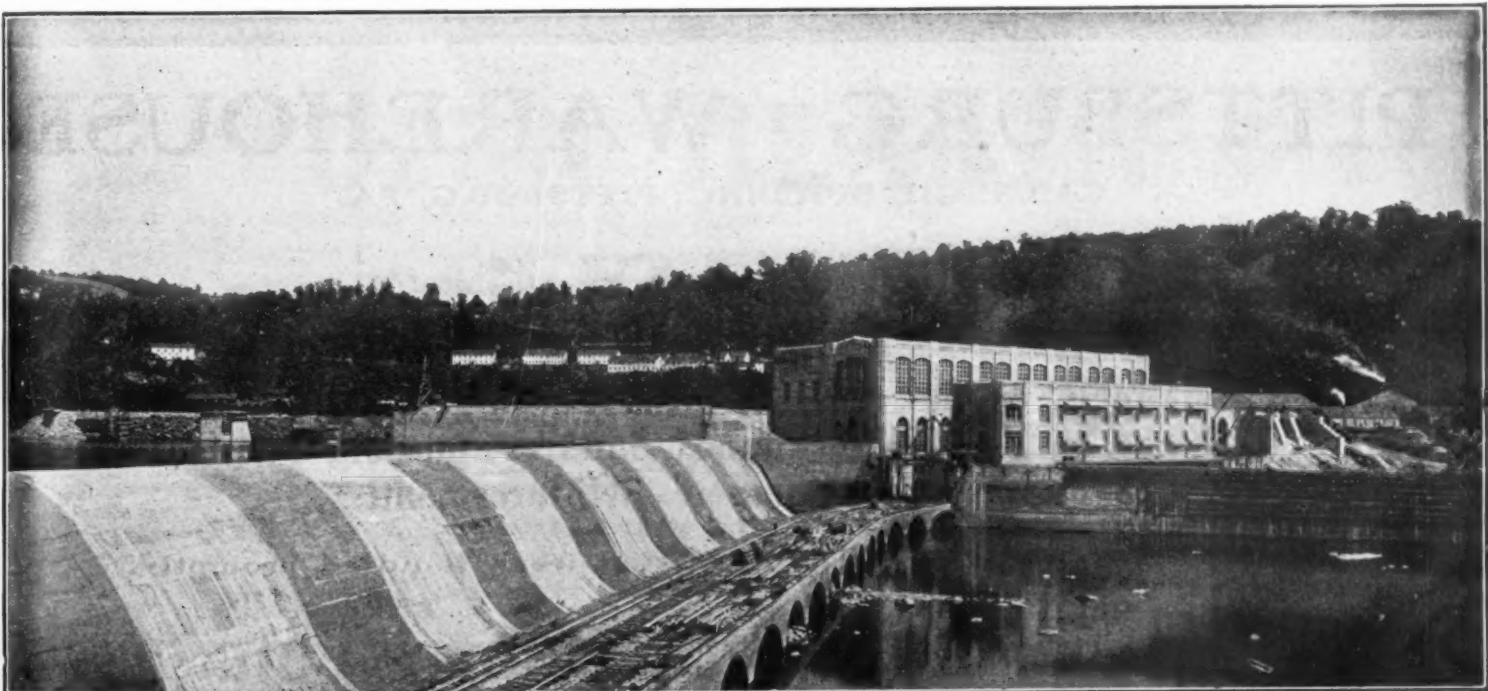
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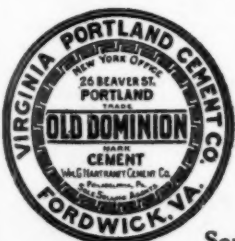
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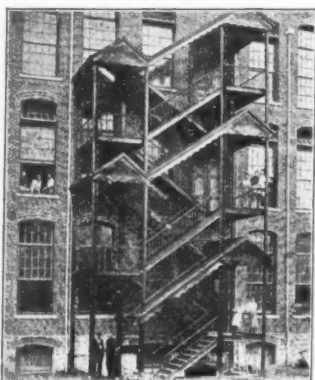
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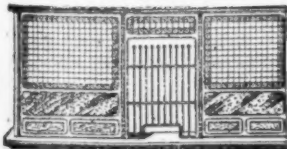
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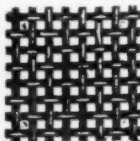
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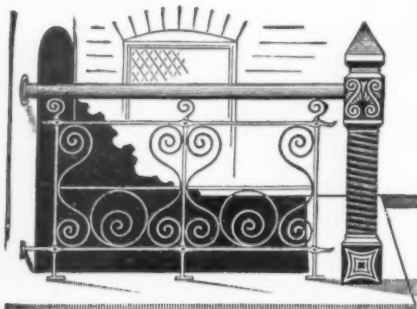


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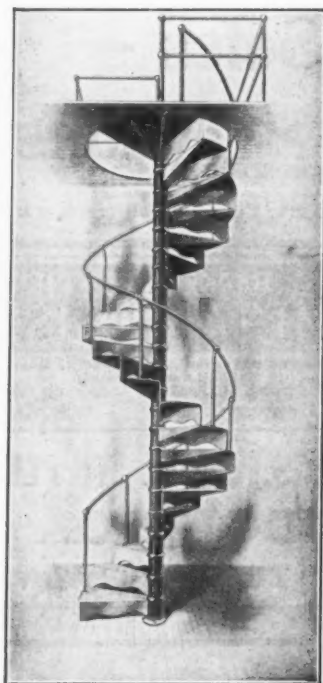
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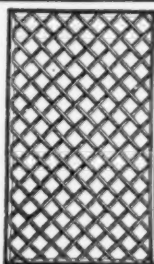
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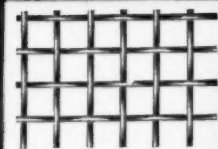
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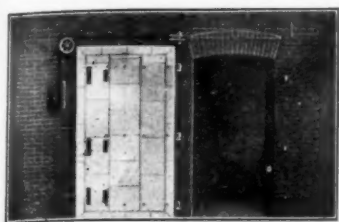
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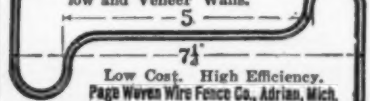
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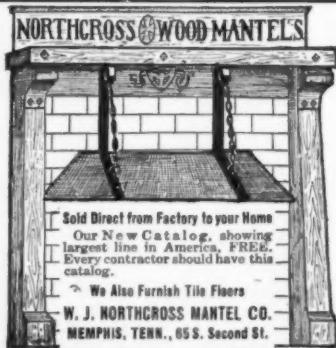
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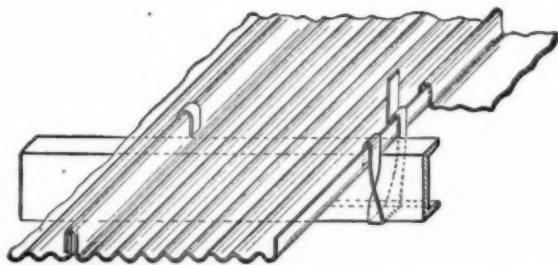
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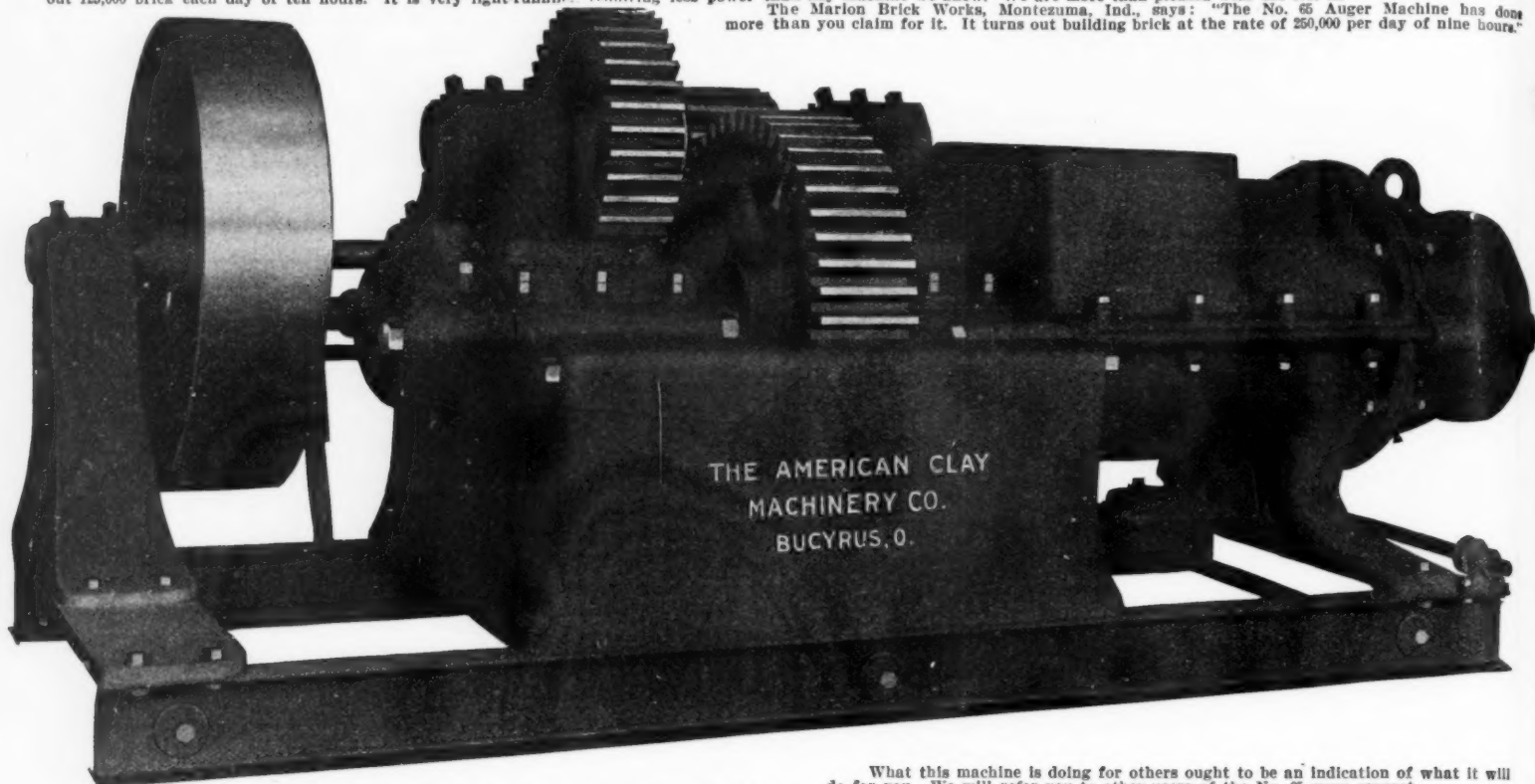
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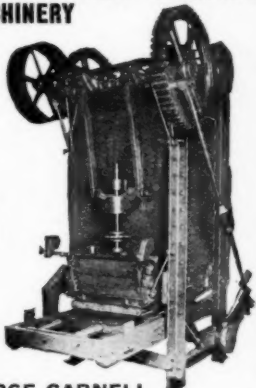
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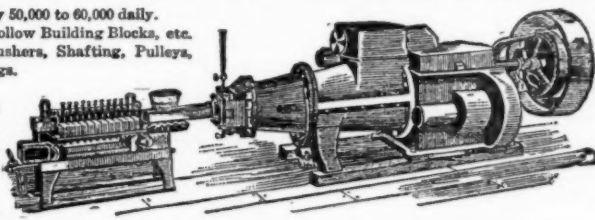
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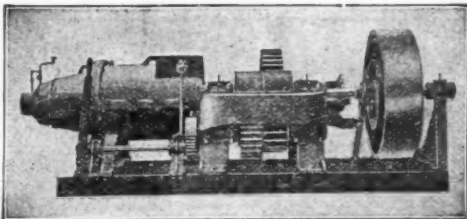
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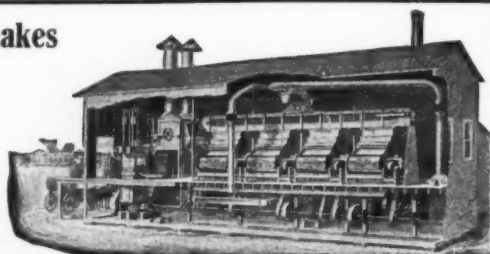
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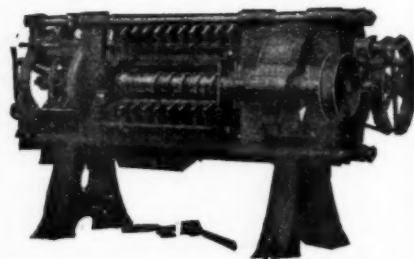
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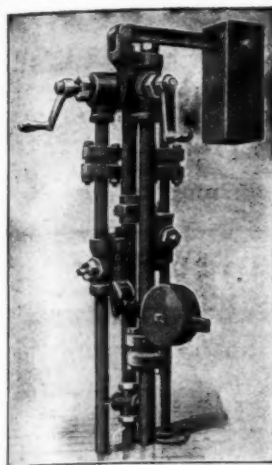
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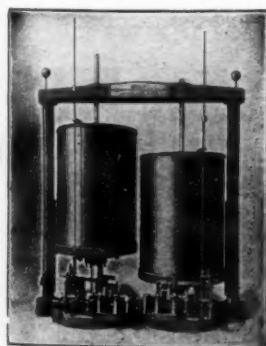
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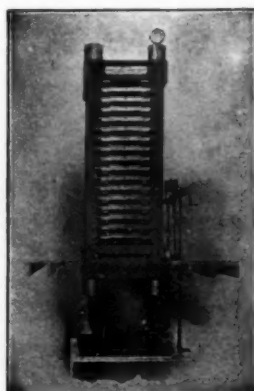
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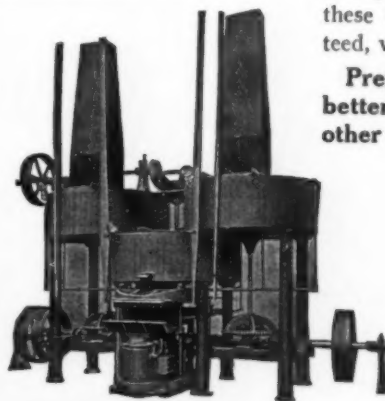
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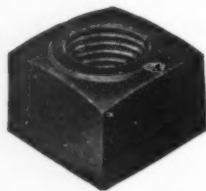


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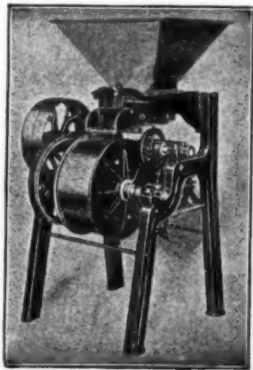
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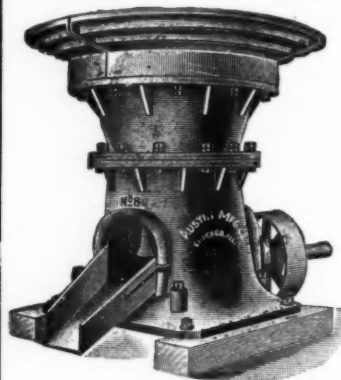
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P M 16.2

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Built in 9 sizes, with capacities 50 to 5000 tons per day. Plans and Specifications Furnished for Any Sized Plant.

Austin Crushers are fitted with either "supported" or "suspended" shafts as desired. Both types are equally efficient and fully guaranteed by us. Those interested in the suspended type will notice from the accompanying cut that our suspended shaft has its point of gyration and point of bearing in the same horizontal plane, thus securing minimum movement and less wear than any bearing of the kind on the market.



Austin Manufacturing Co.

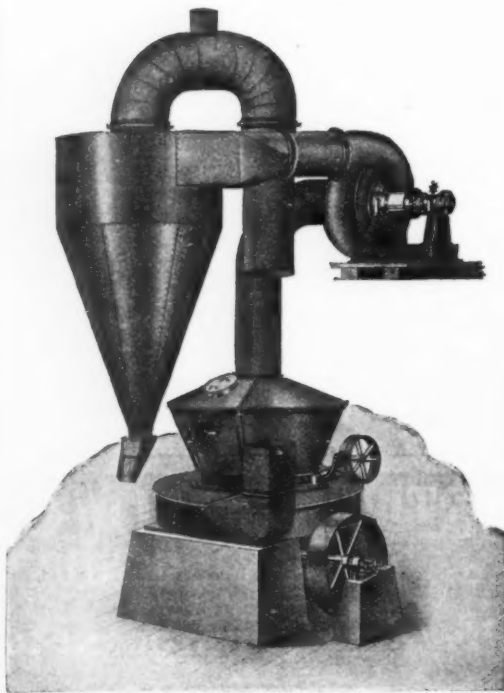
NEW YORK. CHICAGO.

MUSSENS, LTD.

CANADIAN SALES AGENTS

Montreal, Toronto, Winnipeg, Calgary, Vancouver

We also manufacture: Wheeled and Drag Scrapers, Road and Elevating Graders, Road Plows, Scarifiers, Street Sprinklers and Sweepers, Road Rollers, etc., etc.



These Pulverizing Mills Grind any material to a fineness impossible by any other process —yet are the simplest of all

The Raymond Pulverizing, Air Separating and Conveying System accomplishes what has never been done before and is not now done by any other known process. It not only grinds any material to the finest possible mesh, but it automatically and instantly separates the pulverized material and conveys it to the point of storage while the grinders are still in operation.

RAYMOND Pulverizing Air Separating and Conveying SYSTEMS

do even more. They save money, power, labor, time, space, material, cost of upkeep, and at the same time increase the general efficiency of men and machinery. Every pulverized atom is confined within the mill, is saved and delivered to where you want it. No dust escapes to choke and poison workmen in the grinding room.

Raymond Pulverizing Systems are designed by our Engineering Specialists who fit them to conditions existing in your plant. They are installed with our absolute guarantee that they will do the service we claim and that you require or the sale is not made.

We design special machinery and methods for Pulverizing, Grinding, Separating and Conveying all powdered products. We manufacture Automatic Pulverizers, Roller Mills, Vacuum Air Separators, Crushers, Special Exhaust Fans and Dust Collectors.

Send for our book No. 40, which explains in detail what our system is and how and where it may be used.

Read this book and you may find the way to divert some items from the expense account into the dividend account.

Raymond Brothers Impact Pulverizer Co.

1506 Harrison Street

Chicago, Illinois

(3E)

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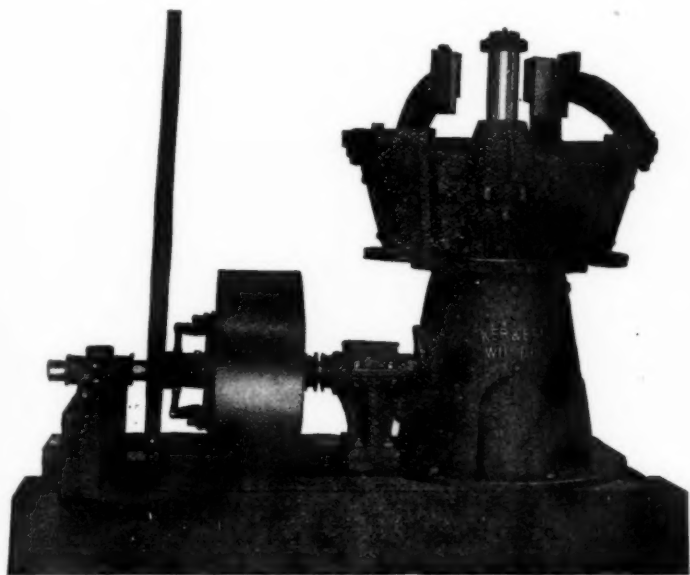
REMINDER

To write Raymond Brothers Impact Pulverizer Company, 1506 Harrison St., Chicago, for their Book No. 40 on Modern Methods of Pulverization and Air Separation.

Rotary Fine Crusher

(HINGED TOP)

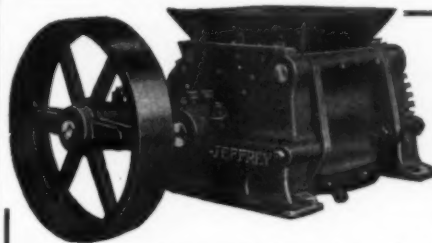
This well-known crusher was made to meet the want for a crusher that could be easily gotten into, so as to remove iron or other foreign material. The hinged top is so made as to fit any of our rotary fine crushers now in use. Considering the improvements, we believe we are offering the best fine crusher to be had.



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Fertilizer Machinery Specialists.

Everything required in a Fertilizer Factory.



Jeffrey Single Roll Crushers

reduce run-of-mine coal to stoker size in a single operation.

This Crusher is self feeding and can be located directly beneath the receiving hopper, or storage bin.

It has machined joints, is compact and strongly built; will withstand hard, continuous service. All working parts are readily accessible.

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From Cork to Corundum GARDNER CRUSHER

Has Widest Range and Is the Best

Grinds Wet or Dry. Any desired fineness. Especially adapted for Phosphate and Cement Rock, Coal, Oyster Shells, etc.

Tell us your Pulverizing Problems.

Send a sample of the material you wish ground.

Let us show you just what the GARDNER will do
Most Economical in Cost and Maintenance Ask for Catalogue

Gardner Crusher Co., 552 W. 34th St., New York City

CLAY AND SHALE GRINDERS

WILLIAMS PATENT HAMMER TYPE

Shale Crushers. Shale and Clay Grinders
for Brick Yards.

Special Wet Clay Grinders, will grind any wet clay
that will make brick.

Manufactured and Licensed Under 87 Separate and Distinct Patents.

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1700 Machines Now in Use.

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of every description

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WASHERS, Wood or Steel Logs. ORE JIGS for Hard Service. ELEVATORS,
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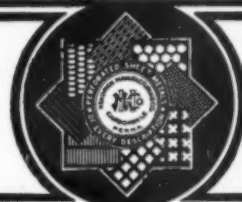
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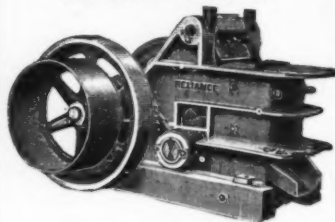
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For Concrete, Road Work and
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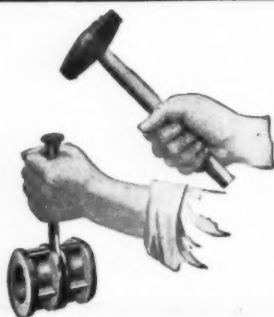


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THE BEST AND THE CHEAPEST
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CAST IRON PULLEYS

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The better it is liked*

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If it were not a thoroughly satisfactory wall
plaster the demand for it would not con-
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porous rendering it safe and sanitary. Free
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quickly. It is the modern plaster for the
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Protect your HOMES, PUBLIC and PRIVATE
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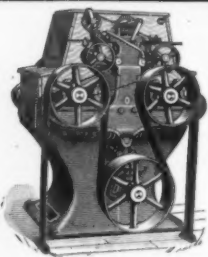
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Manufacturers of FLOUR AND CORN MILL MACHINERY, WOOD SPLIT AND IRON PULLEYS,
RING OIL HANGERS, COUPLINGS, GEARINGS, COLLARS, Etc.
Shafting, Belting, Mill and Elevator Supplies in Stock. Write for Prices.
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A complete stock of Leather and Cotton Belting, Elevator
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AMERICA'S LEADING MILL BUILDERS

1833 W. MORRIS ST. Established 1851 INDIANAPOLIS, IND., U. S. A.

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RAILROAD STAND PIPES.
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SWITCH STANDS FOR ALL PURPOSES.
WATER METERS.

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THE OPALUX CO
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Waterproofing and Insulating Felts,
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Lasts longer and gives better service than other paints, and costs less money.

Especially suited to exposed metal, brick and wood surfaces.

The Panama Canal Commission used, after rigid test, 15,000 gallons in one year, covering 2000 roofs.

The Cunningham Paint solved the problem of paint protection in Panama.

Thoroughly satisfactory for Iron and Steel Structures, Smokestacks, Boiler Fronts, Brick or Concrete Walls, Bridges, Tanks, Galvanized or Tin Roofs, Etc.

Booklet Gladly Sent on Request.

MARYLAND STEEL CO.
Sparrow's Point, Md.

The Remedy

For that hot and stifling room is a

Sturtevant Electric Propeller Fan Also Made for Pulley Drive



They increase output, reduce sick leave, and raise efficiency of workers by keeping the air fresh and cool.

Easily and cheaply installed, the first cost is small.

The scientific construction and design of the fan blades makes possible the moving of immense volumes of air at small expenditure of power.

These fans are invaluable for use in work rooms, offices, kitchens, billiard halls, and in all places where heat, smoke or fumes are to be removed.

Our engineering staff are always ready to make suggestions if you will inform us of the conditions to be met, the size of the room, etc.

Bulletins 146 N and 149 N describe these fans.

B. F. Sturtevant Co.
Hyde Park, Mass.

Offices within calling distance from all large centers.

No. 859

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OF SCALES FOR
RAILROADS
OIL MILLS
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Our Catalogue contains every improvement known to modern science in the manufacture of heavy weighing machines.

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"THE STANDARD" SCALES

Are Made Right, Weigh Right, and Are Sold at a Price that is Right. Will weigh from 1/4 ounce to 200 tons. If you need Good Scales write us for prices.

The Standard Scale and Supply Co. 243-245 Water Street, Pittsburgh, Pa.

NEW PLANT UP-TO-DATE NEW MACHINERY
Rome Scale & Manufacturing Co.
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SCALES AND TRUCKS
OF ALL KINDS.



NIAGARA POCKET WRENCHES

Are Handy, Useful, Durable



Fit all nuts, square or hexagon.
Made in 8 sizes, 5-16 in. to 3-4 in.
Every Jobber should see a sample.
Ask for Folder 90M.

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Manufacturers of Hardware Specialties
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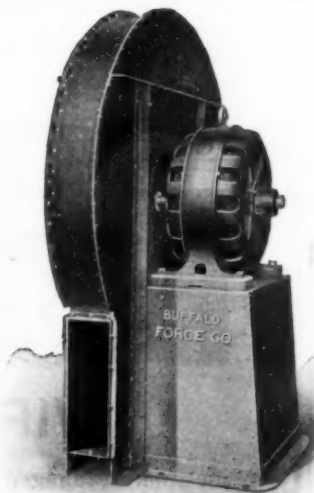
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**Seals
Stencils
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THAN THOSE MADE BY
DIXIE SEAL & STAMP CO., ATLANTA, GA.
Try us with your next order.



A fan of this type was recently built for the New Jersey Zinc Co. in competition with several other manufacturers. By test the Buffalo Fans, designed for certain specified conditions, showed considerably higher efficiency than the other makes, and one of the largest individual fan orders heard of was subsequently placed with us—for 54 fans, making up eight full carloads.

Out of the Beaten Path

The man who considers his question of blower equipment properly will very often get away from stock size blowers, especially for high pressure service. In this case a built-to-order

Buffalo Steel Plate Pressure Blower

will exactly meet his individual needs. It can be used with standard speed motors, or if you already have a motor, we will make the fan to suit its speed. Though we make these fans special, we can make prompt shipments.

We positively guarantee these fans to be the most efficient ever made for high pressure service, not excepting all the multi-blade high efficiency fans. The price is no higher than an ordinary fan—as to results, read the paragraph beneath the illustration.

We will be glad to send you Catalog No. 180-EQ. Ask for it.

Buffalo Forge Company
Buffalo, N.Y.

New York Philadelphia Charlotte St. Louis Chicago

ASHLAND FIRE BRICK CO.

ASHLAND, KENTUCKY

FURNACE LININGS
CEMENT KILN LININGBOILER SETTINGS
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The name **HARBISON-WALKER** stands for the highest quality attainable in Fire Clay, Magnesite, Silica and Chrome Brick.

It means **MAXIMUM SERVICE** at **MINIMUM** cost, whether in the Iron and Steel Industry, the Cement Plant, the Glass House or the Power Plant.

It means **QUALITY**, and it is on this basis we ask the opportunity to take it up with you.

Catalog "C" is yours for the asking.

**HARBISON-WALKER
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PITTSBURGH :: PENNSYLVANIA

ROLLING Steel and Wood DOORS

THE KINNEAR MANUFACTURING CO.

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THERE ARE

NONE OTHERS

"JUST AS GOOD"

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U.S.A.
THE WORLD'S STANDARD

**FIREPROOFING OUR NAVY WITH THE
DAHLSTROM PRODUCTS**

The newest battleships Florida and Utah will be equipped with The Dahlstrom Products.

The need of this interior fireproofing with steel upon the sea, with every avenue of escape cut off, is no greater than in your building. The walls and floors of fireproof construction are no more protection to life and contents than the battleship's steel hull.

"Buildings As They Should Be" tells more about Dahlstrom Metallic Doors and Trim—what constitutes interior protection. Your request brings a copy. Write

DAHLSTROM METALLIC DOOR COMPANY

THE DAHLSTROM PRODUCTS

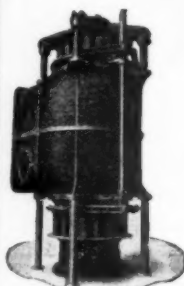
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BRANCH OFFICES IN ALL PRINCIPAL CITIES.**LOWELL CRAYONS**

We are still making them with as much care as ever. 15 colors to select from.

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Original Makers

Trade Mark on Every Box.

**Complete Hydro-Electric Equipments**

of Any Type, for Any Head, for Any Conditions

500,000 H. P. now in operation or under construction.

Write for Bulletins.

Allis-Chalmers Company

General Offices: Milwaukee, Wis.

Wire Rope Confidence

Our business and reputation are founded on the care we give to making **YELLOW STRAND WIRE ROPE**.

If you have used it, you know. If you haven't, your knowledge of our standing will give you the confidence to try it.

YELLOW STRAND never betrayed a confidence.

**BRODERICK & BASCOM ROPE CO., 809 N. Main St., ST. LOUIS, MO.**WORKS { St. Louis, Mo.
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Made from Roebling Wire drawn from carefully selected and tested metals and stranded into rope in accordance with designs shown by long experience to be best adapted for satisfactory service.

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WAREHOUSE IN SAVANNAH

Trenton, N. J.

MANUFACTURERS RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U. S. Patent Office.

VOL. LX. No. 2.
WEEKLY.

BALTIMORE, JULY 20, 1911

\$4.00 A YEAR.
SINGLE COPIES, 15 CENTS.

Manufacturers Record.

PUBLISHED EVERY THURSDAY BY THE
MANUFACTURERS RECORD PUBLISHING CO.
BALTIMORE.

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FRANK GOULD, Vice-President.
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Editor and General Manager.

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Subscription, \$4 a year
(payable in advance) to United States,
Mexico, Cuba, Porto Rico, Hawaii and the
Philippines.

To Foreign Countries (including Canada) in
the Postal Union, \$6.50 a year.

[Entered at the Baltimore Postoffice as sec-
ond-class matter.]

BALTIMORE, JULY 20, 1911.

CHOLERA.

The efforts of influences in Italy to suppress news of the cholera epidemic in Southern Italy are due not so much to a desire to reap profits from tourists as to fear lest the long-sustained scheme to dump Italian immigrants, undesired as citizens by influences in their homes, upon the South, and promoted under guise of "Southern" parliaments, congresses, conventions, etc., be permanently shattered.

COTTON IN COMMERCE.

In the fiscal year ended June 30 domestic merchandise to the value of \$2,012,919,918 was exported from this country, an increase of \$302,835,920, or 17.7 per cent., over the preceding fiscal year. Of the total increase, \$134,818,418, or 44 per cent., represented the increase in the value of exports of raw cotton. Variations in the two years are indicated by the figures for five groups of articles, aggregating something more than 46 per cent. of the total value of domestic merchandise exported, shown in the following table:

Articles.	1910.	1911.
Breadstuffs.	\$121,651,643	\$111,703,235
Meat and dairy.	109,836,988	125,559,110
Cattle, hogs, etc.	11,890,343	13,226,754
Cotton.	449,833,259	584,651,677
Mineral oils.	94,616,398	82,148,924
Total.	\$787,818,631	\$927,289,700

There was an increase between 1910 and 1911 in exports of cattle, hogs and sheep from \$11,890,343 to \$13,226,754, or by \$1,346,411, equal to 11.3 per cent.; in meat and dairy products from \$109,836,988 to \$125,559,110, or by \$15,722,122, equal to 14.3 per cent., and in cotton from \$449,833,259 to \$584,651,677, or by \$134,818,418, equal to 29.9 per cent.

There was a decrease in mineral oils from \$94,616,398 to \$82,148,924, or by \$2,467,474, equal to 2.6 per cent., and in breadstuffs from \$121,651,643 to \$111,703,235, or by \$9,948,408, equal to 8.2 per cent. The aggregate increase in these five groups was from \$787,818,631 to \$927,289,700, or by \$139,471,069, equal to 17.7 per cent. Of this aggregate increase the increase in cotton constituted nearly 97 per cent., and the increase in cotton was 44 per cent. of the increase in all domestic merchandise exported. The \$584,651,677 worth of raw cotton exported was 29 per cent. of the \$2,012,919,918 worth of domestic merchandise exported in the past fiscal year.

The commercial cotton year will not end until August 31, but the part that cotton exports have played in the foreign trade at Southern ports is suggested in the following comparison of the values of cotton exports in 10 months ended with June in the past two fiscal years:

Districts.	1910.	1911.
Baltimore.	\$4,115,807	\$7,740,503
Brunswick.	13,228,482	13,050,965
Charleston.	8,024,177	8,901,830
Norfolk and Portsmouth.	373,374	915,105
Savannah.	53,125,499	62,788,925
Wilmington.	20,743,090	28,588,600
Galveston.	151,305,620	199,833,978
Mobile.	11,360,589	13,773,860
New Orleans.	85,071,372	112,207,097
Pearl River.	598,397	2,683,773
Pensacola.	10,462,346	9,230,110
Sabine.	10,620,151	15,927,341
Corpus Christi.	138,923	34,780
Paso del Norte.	57,401	8,966
Saluria.	45,440	4,257

Total. \$369,270,578 \$475,690,129
All districts. \$432,170,165 \$556,728,547

In these two periods of 10 months the exports of cotton mentioned, constituting 99 per cent. of such exports from all ports, increased from \$432,170,165 to \$556,728,547, or by \$124,558,382, equal to nearly 29 per cent. Of the total value in the 10 months ended with June, 1911, about 86 per cent. was exported from the Southern customs districts mentioned, and of the total of these districts \$199,833,978 was exported from Galveston and \$112,207,097 from New Orleans.

A JOB LOOKING FOR A MAN WHO FOUR YEARS AGO WAS AD- VERTISING FOR A JOB.

From a leading manufacturing concern in Louisville, Ky., we have a letter as follows:

We enclose a clipping from your paper about two years ago, we think. If you could conveniently refer to this No. 58 we would like to be put in correspondence with him.

The advertisement was that of a young man seeking a position in the South, which appeared in our issue of December 27, 1906, or four and a half years ago. At this late date this Louisville concern, which evidently had kept this advertisement on file, thinking that some day it might need such a man as the advertiser described himself to be, now finds an opportunity for using him if available. In fact, the company has just sent us an advertisement for a man to fill a position now vacant, and they want very much the same kind of a man who four and a half years ago was advertising for a job. It is a curious

illustration of the fact that no one can ever tell how long the value of an advertisement may last.

A somewhat similar case came to us a month ago, when a gentleman in El Paso, Tex., enclosed an advertisement from the MANUFACTURERS RECORD of January 6, 1910, nearly 18 months ago, and wrote:

It is rather late to address this party in person, but if you have his address I would like to get in communication with him.

This advertisement was that of an Ohio man. It appeared in the Classified Opportunities Department, stating that he was in a position to influence capital for the development of industrial interests.

THE OPPORTUNITY FOR SMALL INDUSTRIES IN THE SOUTH.

In a number of places in the South, as indicated by letters to the MANUFACTURERS RECORD within the last few days, there is active interest in the establishment of pearl-button factories.

Mr. E. M. Turner, the assistant city engineer of Shreveport, La., writing under date of July 10, states that he is desirous of going into the pearl-button manufacturing business, and wants to communicate with manufacturers of pearl-button machinery.

Mr. J. S. Stewart, secretary of the mineral and forestry committee of the Appalachian Exposition, Knoxville, under date of July 6 wired the MANUFACTURERS RECORD:

Kindly send names of several manufacturers of pearl-button machinery, as we have large deposits of mussel shells which are shipped for pearl-button making in New York and Mississippi River points. We desire machinery in operation at the exposition.

Mr. Walter C. Watt, 179 Main street, Barnesville, O., also writes to us asking for the names of manufacturers of machinery for making buttons from mussel shells.

There are many possibilities in the South for establishing industries to make small things—buttons, for instance—and it is to the manufacture of these smaller things that the South should give special attention. No one can travel through New England without being impressed with the many factories seen in every direction for the manufacture of small things, from pins and needles, and eye hooks and buttons and eyelets, all the way up to the ponderous engines, boilers and similar work. The prosperity of New England is largely based on the making of small things. There is scarcely a great factory in New England that has not come as the outgrowth of some little concern with but limited capital. The manufacture of clocks in Waterbury, for instance, where there is one factory employing 3000 hands in the manufacture of clocks and watches, is the outgrowth of the invention of the old wooden clock which one or two men would make by hand and peddle around through New England, starting out with possibly half a dozen clocks and returning to make another lot when they were sold. Out

of so small a beginning Waterbury has become the great center of clock-making in America, and partly as a result of that has come the development of other interests, including watch-making and brass work. Similar conditions could be found in almost every town in New England. The South needs to learn this lesson and to follow New England's example in the diversification of its industries and in the establishment of small enterprises to make things consumed at home.

SOUTHERN BANK DEPOSITS.

In 1900 individual deposits in National banks in the South aggregated \$265,000,000, or something more than 10 per cent. of the individual deposits in the National banks of the country. On June 7, 1911, the deposits in National banks in the South were \$726,287,726, or nearly three times as much as in 1900, a wonderful illustration of the South's increasing wealth. The extension of the National banking system in the South, because of the popularity of the State banking system in that section, was for a time of slower growth than in the rest of the country, but it has become more rapid since the passage of the act of 1900, facilitating the organization of National banks. This is indicated in a comparison of the deposits in National banks in the South at about the same period in 1900 and 1911 as follows:

States.	June 23, 1909.	June 7, 1911.
Alabama.	\$24,746,878	\$33,217,770
Arkansas.	12,454,813	17,032,446
Dist. of Columbia.	22,912,777	25,910,470
Florida.	20,484,516	29,635,300
Georgia.	32,458,650	43,025,383
Kentucky.	52,434,717	67,859,627
Louisiana.	28,818,512	34,698,281
Maryland.	74,318,898	82,002,488
Mississippi.	10,405,811	13,207,166
North Carolina.	13,242,490	25,984,286
South Carolina.	13,636,320	18,722,255
Tennessee.	45,087,729	55,135,882
Texas.	142,406,084	164,131,955
Virginia.	61,992,884	80,070,965
West Virginia.	35,451,987	45,651,422
Total.	\$598,853,075	\$726,287,726
Missouri.	\$140,869,075	\$145,531,666
Oklahoma.	\$58,111,948	\$52,253,331
United States.	\$4,896,576,696	\$5,477,991,156

Between 1909 and 1911 the deposits of National banks in the South increased from \$598,853,075 to \$726,287,726, or by \$127,434,651, equal to 21.3 per cent., and in the National banks in the rest of the country from \$4,299,723,021 to \$4,751,705,430, or by \$451,981,809, equal to 10.5 per cent., and the deposits in the National banks in the South constituted 13.2 per cent. of the total deposits of the kind in the whole country. In this connection it is interesting to note that of the total \$634,095,698 of savings deposits in National banks, \$100,483,935 are in Southern banks this year.

ECONOMY OF TIME AND SUB- STANCE BY EMPLOYEES.

Although most railroad companies have always endeavored to practice economy in conducting their business, it has, with most of them, not been difficult for observers to note wastefulness here and there which, if checked, would have resulted in considerably greater net profits. Therefore, the efforts now

being made by the officers of several lines to promote a high degree of saving among all their employes are interesting not only to railroad men, but to all others.

It seems that the recent impulse to thrift among railroads began on the Chicago, Rock Island & Pacific Railway, whose operatives were reached through an article in their magazine calling upon each of them to save five cents a day for the company, or, if that were impossible, to at least save a few cents. This, it was remarked, would mean a large reduction of expenses and consequent prosperity. It was furthermore suggested that the greater welfare of the company meant the employment of more men and the payment of higher wages.

The Burlington Route also took up the matter of saving, sending personal letters from the president's office to all men on the system. Other companies fell in line, among them the Pennsylvania, which recently asked each of its men on the Schuylkill division to endeavor to save 10 cents a day, which, if done, would mean about \$50,000 a year on that division. It was pointed out that enginemen could save oil, firemen coal, trackmen spikes and bolts; shopmen could save by increased care in their work, clerks by care in the use of stationery and by avoiding mistakes, besides other savings which could be accomplished elsewhere by lessening damages to freight either in stations, warehouses or in transit.

Especially interest attaches to these endeavors on the part of some of our great railroads, because economy is rarely popular and it is a virtue which does not appeal to the gallery. Moreover, it is to most natures inconvenient and troublesome. To get full use out of anything, be it oil, fuel, metal, paper or one's own labor demands thought, and thought requires effort, which demands energy, the expenditure of which is fatiguing, and many persons dislike fatigue, especially those who were "born tired." Neither does economy appeal to the man who wants to show what he can do. Youth, overflowing with energy, desires to accomplish something to win applause and advancement, and there is no denying that the man who achieves success in getting business receives more immediate glory and profit than he who, by judicious, painstaking economy, prevents the earnings thus secured being turned into net loss, although the claim of the latter to recognition cannot be gainsaid.

But economy does not mean parsimony; it means no more than getting what we ought to receive out of what we have, and in the end the economical man who combines business energy and enterprise with proper thrift will win. Economy is not to avoid spending more money, but to properly use what we do spend, and to spend liberally as may be required to make the profit sought. There are some expenditures which may appear extravagant today, but which, based on experience and knowledge, are the greatest of economies in years to come.

But such things are not what people generally regard as economy. The saving which the railroads seek is to avoid waste. To accomplish what is now desired requires effort above and beyond the average, and this makes the experiment of the companies all the more interesting. In nearly every business economies could be effected if employes were as careful about not wasting

the time and substance of employers as about not wasting their own money. No man has a right to call himself honest who does not regard his employment as a trusteeship demanding care and thought in making and in saving equally as great as he would endeavor to achieve if the business belonged wholly to him. In fact, trusteeship really demands greater zeal than one gives to his own affairs. The campaign of the railroads will be watched with interest. It should become the universal rule, for it means more efficiency, greater savings through economy instead of waste as now, and also a higher standard of ethics. If in every home and every school the young were taught a sense of responsibility to their work, whatever it may be, the evil of shirking burdens instead of bearing burdens, and the sin of wasting their employers' time as well as their own, we would develop a higher moral sense among men and women and the world would be wonderfully benefited.

WHEN THE COTTON HARVESTER IS PERFECTED.

When the mechanical cotton picker has been perfected, when the invention upon which many bright minds are now directed has become a working, commercial proposition within easy reach of thousands of growers for practical continuous use in the fields, a revolution will have been effected second, in its far-reaching importance for humanity, only to that which was started when Robert McCormick beat out the early crudities of the wheat reaper in Virginia. That happened just about a century ago. But 20 years elapsed before Cyrus H. McCormick, born in the year of his father's invention, set the reaping machine permanently in the wheat fields. Even thereafter the substitution of machine for hand was comparatively slow. Some of us hardly beyond the half-century mark have cradled wheat in our youth. Steadily and surely, however, the reaping machine has traveled round the world, followed by other inventions for facilitating the handling of the great food crop for world markets. The man with the wheat cradle has virtually passed forever. His energies have been given less arduous and more remunerative direction. The 10-acre wheat farm has faded before the 10,000-acre wheat farm. So it may be expected of the cotton harvester.

The inventions up to date—and there are probably a dozen of them—look immediately to the reduction of the number of hands in cotton picking on a large scale, the mechanical picker doing with one man or with two or more men the work of a dozen or more hand pickers, just as the mechanical type-casting machine does, under the manipulation of one man, the work of four typesetters of the old regime. The successful picker must be simple in construction and operation and comparatively cheap. It should be readily adaptable to operations upon tracts of 100 acres or more, and when perfected it will release in the aggregate many thousand workers into more productive occupations, such as mining, manufacturing, railroad construction, lumbering, etc., which have been hampered at frequent intervals in the South because of a shortage of capable workers. While expensively constructed pickers may help to solve the picking problem in the territory of great plantations, and may even help to concentrate cotton-growing into big plantation enter-

prises, a simple and less expensive picker must be found to aid the small growers.

It is hardly likely that the invention will ever take the form of a machine that the grower of three or four or five bales of cotton can afford to own, the comparatively small results from a limited acreage not justifying an investment of any large sum of money in it, if, indeed, the lay of the land of such small tracts should permit the operation of the mechanical picker. But, as in the case in many of the older wheat-growing regions, the steam thrasher, and now the motor thrasher, owned by one man, does the work of a dozen or more farms to the satisfaction of everybody concerned, so it may be expected that some owners of motor cotton pickers will do like work for the smaller growers in their neighborhoods. Still, with the facilities furnished by the machine for harvesting cotton on an extensive scale, one may look for a gradual merging under one ownership of many small cotton farms into large plantations, toward which there is already a decided tendency. Of course, such merging will be impossible in many instances, and, consequently, some land now farmed for cotton may no longer produce it in competition with the larger operations. That, however, will mean neither the passing of the small independent farmer nor a reduction in the cotton acreage of the South. There are millions of acres in that section which have not yet grown a crop of any kind, but are capable, under reclamation and proper cultivation, of growing a bale of cotton to the acre. That more cotton is not grown in the South is due principally to a lack of facilities for harvesting the crop. The mechanical picker and the inventions that are bound to follow it will remedy that deficiency. At the same time, even though the South is now marketing in other sections early fruits and vegetables to an annual value of at least \$100,000,000, only a beginning of that industry, which yields far more per acre than cotton, has been made. It will not take long for the small cotton-grower to change to the far more profitable truck-growing, which is essentially intensive in character. Therefore, the coming of the mechanical cotton picker should be welcomed by everybody interested in the all-around development of Southern agriculture. Every invention of the kind should be given careful and generous study, and every opportunity should be offered for a demonstration of its capabilities and for the practical experiments that will show how it may be bettered and perfected.

FORWARDING IMMIGRANTS.

Emmanuel Zannellis & Co. of Smyrna write to the MANUFACTURERS RECORD:

We take the liberty of calling your attention to the work in which we are regularly engaged, forwarding emigrants to the United States of America. We would be under many obligations if you would recommend us to American firms who would take charge of these people immediately upon their arrival and for a small commission secure them suitable employment.

Though this correspondent in Turkey is acquainted with the MANUFACTURERS RECORD, he does not seem to be familiar with the act of February 20, 1907, regulating the immigration of aliens into the United States, for his suggestion that there may be American firms who would take charge of aliens forwarded by him to this country, and for a small commission secure them suitable employment, seems to trench upon section 2 of that act excluding from admission

to this country persons "who have been induced or solicited to migrate to this country by offers or promises of employment or in consequence of agreements, oral, written or printed, expressed or implied, to perform labor in this country of any kind, skilled or unskilled." The conviction is growing in this country that that provision of the immigration law may be detrimental to the country. But as long as it is law it should be vigorously enforced.

THE SOUTH IN INVENTION.

Citizens of the 14 Southern States have been granted 15,207 patents in the past five years, or 9.7 per cent. of the total 156,221 granted to citizens of the whole country. The number of patents granted in that period is shown by individual States in the following table:

States.	1906.	1907.	1908.	1909.	1910.
Ala.....	131	156	134	184	181
Ark.....	129	150	112	142	125
Fla.....	78	111	110	96	114
Ga.....	224	244	239	263	214
Ky.....	367	304	281	279	267
La.....	144	160	147	171	181
Ms.....	303	333	229	299	305
Miss.....	100	108	97	115	129
N. C.....	144	153	173	205	181
S. C.....	74	72	65	69	86
Tenn.....	356	232	244	252	248
Tex.....	437	544	524	544	670
Va.....	267	274	251	269	240
W. Va.....	203	237	302	198	216
Total.....	2,868	3,148	2,929	3,108	3,154
U. S.....	28,335	32,603	29,800	33,421	32,669

Between 1883 and 1910 the number of patents granted to citizens of the South annually increased from 1564 to 3154, or by 1590, equal to 101.7 per cent. The number granted to citizens in the United States annually increased from 20,963 to 32,059, or by 11,096, equal to 52.9 per cent.

The Commissioner of Patents points out in his annual report that in proportion to population more patents were issued to citizens of Connecticut in 1910 than to those of any other State, the proportion for Connecticut having been one patent to every 1126 of the population. The proportions in other States were as follows:

District of Columbia, 1 to every 1329; California, 1 to every 1616; Massachusetts, 1 to every 1623; New Jersey, 1 to every 1727; Colorado, 1 to every 1765; Illinois, 1 to every 1782; New York, 1 to every 1841; Ohio, 1 to every 1926; Rhode Island, 1 to every 1951; Nevada, 1 to every 1992; Pennsylvania, 1 to every 2242; Washington, 1 to every 2719; Wisconsin, 1 to every 2805; Michigan, 1 to every 2891; Missouri, 1 to every 3002; Utah, 1 to every 3010; Oregon, 1 to every 3071; Idaho, 1 to every 3100; North Dakota, 1 to every 3153; Indiana, 1 to every 3326; New Hampshire, 1 to every 3417; Minnesota, 1 to every 3443; Nebraska, 1 to every 3455; Iowa, 1 to every 3685; Kansas, 1 to every 3708; Montana, 1 to every 3917; Vermont, 1 to every 3999; Arizona, 1 to every 4170; Maryland, 1 to every 4247; Wyoming, 1 to every 4293; South Dakota, 1 to every 4325; Alaska, 1 to every 4596; Delaware, 1 to every 4705; Maine, 1 to every 4981; Texas, 1 to every 5800; West Virginia, 1 to every 5814; Oklahoma, 1 to every 6373; Florida, 1 to every 6601; New Mexico, 1 to every 6679; Virginia, 1 to every 8548; Kentucky, 1 to every 8576; Tennessee, 1 to every 8809; Louisiana, 1 to every 9151. The fewest patents granted in proportion to the number of inhabitants were in the following States and Territory: South Carolina, 1 to every 17,620; Mississippi, 1 to every 14,975; Hawaii, 1 to every 13,707; Georgia, 1 to every 12,192; North Carolina, 1 to every 12,056; Alabama, 1 to every 11,812, and Arkansas, 1 to every 11,662.

The proportion of patents to the population of the South in 1910 was 1 to

every 8728 of the population, and the proportion for the rest of continental United States was 1 to every 2234 of the population. In this comparison it must be borne in mind that about one-third of the population of the South is a race which can hardly be classed as inventive.

ACTIVITY IN MUNICIPAL WORK IN THE SOUTH AS INDICATED BY ADVERTISEMENTS.

Fulton county, Georgia, proposes to build at Atlanta a courthouse to cost about \$750,000. Recognizing the importance of securing the widest publicity in order to get the best competitive bids from leading concerns throughout the country, the county authorities have in this issue of the MANUFACTURERS RECORD five separate advertisements. One calls for bids for waterproofing in the construction of the courthouse; one for reinforced concrete and framework; one for piling; one for tile fireproofing, and one for structural steel work. The building will be about 130x220 feet. It will be a structure worthy of Atlanta and of Fulton county. Information in regard to the work can be secured from H. E. W. Palmer, chairman of the commissioners of roads and revenues, Atlanta, or the associate architects, A. Ten Eyck Brown or Morgan & Dillon, all of Atlanta.

In the construction of a great building of this kind, as well as in smaller municipal work, it is incumbent upon county, city and State officials to secure the widest possible publicity in order to protect their constituents by getting bids from the largest number of responsible contractors. The chief engineer of the Baltimore sewerage system some months ago said to the MANUFACTURERS RECORD that in his opinion at least \$1,000,000 had been saved to the city of Baltimore by liberal advertising in the MANUFACTURERS RECORD and similar publications, thus bringing bidders for this great work from many parts of the country. In small work, as well as in great, it is equally important to make the largest possible saving. This can best be done by inviting bids, like Fulton county is doing, through the advertising columns of the MANUFACTURERS RECORD. In this connection it is interesting to note the marked activity in municipal work throughout the South, as indicated by the large number of advertisements in every issue of the MANUFACTURERS RECORD calling for bids for buildings, for road work, for street improvements, and also offering bonds for sale, the proceeds to be used for work of this character. A study of these advertisements from week to week will give some indication of the activity in municipal improvement work throughout the South. And these advertisements, according to the unanimous testimony of the officials who place them, bring the desired results in active bids for construction work and also for the purchase of county and city bonds.

THE COTTON MOVEMENT.

In his report for July 14, Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 317 days of the present season was 11,498,610 bales, an increase over the same period last year of 1,302,601 bales. The net exports were 7,383,229 bales, an increase of 1,500,107 bales. The takings were, by Northern spinners, 1,983,666 bales, a decrease of 59,913 bales; by Southern spinners, 2,112,336 bales, a decrease of 95,718 bales.

From the Jacksonville district in East Texas more than 1400 carloads of tomatoes have been shipped since the beginning of the present season.

World's Iron and Steel Trade.

THE BANQUET IN ENGLAND TO JUDGE GARY AND OTHER AMERICANS.

At a banquet given by a number of leading British makers of iron and steel at London in honor of Judge Gary, chairman of the United States Steel Corporation and president of the American Iron and Steel Institute, and other well-known representatives of the American iron and steel industry, who were in London en route to the International Conference at Brussels, were the following Americans: Messrs. E. C. Felton, president of the Pennsylvania Steel Co.; E. A. S. Clarke, president of the Lackawanna Steel Co.; Thomas J. Drummond, president of the Algoma Steel Corporation; James A. Campbell, president of the Youngstown Sheet & Tube Co. and director of the Lackawanna Steel Co.; Joseph G. Butler, Jr., chairman of the American Bessemer Pig-Iron Association, and W. A. Rogers, president of the Rogers-Brown Iron Co.

The chair was occupied by the Duke of Devonshire. The attendance included the leading iron and steel men of Great Britain and a number from the Continent.

The Duke of Devonshire, who gave the toast of the evening—"The Iron and Steel Trades of the World"—said he could not help feeling that he owed his position mainly to the fact that his grandfather was the first president of the Iron and Steel Institute; but whatever his lack of qualification in other respects for the position he occupied, he yielded to no one in the earnestness of his desire to extend to their guests a most cordial welcome. To Judge Gary, whom he might describe as the greatest factor in the steel trade of the world, and to those who accompanied him, a most hearty welcome was accorded, not only as brother-steelmakers, but as representatives of a great and friendly nation. The rapid strides in progress and development that were being made in the United States would act only as an incentive to make this country prove not a bad rival. He also gave a sincere welcome to the friends from Canada. As the nineteenth century had seen the marvelous development, determination and success of the United States, so possibly the phenomenon of the twentieth century might be the transformation of Canada into a great and prosperous nation of industry. The Old Country did not regard such developments with feelings of jealousy; it heartily welcomed them, in the confident belief that there was an immense future for the industries of the world; for as the requirements of the world expanded, so demands for everything the iron and steel industries could produce would be made. They had met not for the purpose of striking a deal, but solely with the object of strengthening, if they could, the strong tie and bond of good-fellowship that should govern all those who were engaged in the same or allied industries. It was inevitable that they should be competitors and rivals, but they could be so in the endeavor to provide what was best for the world and in doing what they could for the benefit of humanity. Trade must necessarily have the same geographical limits as civilization, and as the wealth of men grew, so must the requirements of men grow also. It was for those engaged in the iron and steel industries, wherever they might be, to supply those ever-growing demands. Certain general conditions were common to all who were occupied in productive industries, and it was important that, in whatever country they lived, there should be financial and political stability and reliability. There should

also be that free and uninterrupted flow of capital which was the mainspring of industry, and he had no hesitation in saying that capital and labor must go hand in hand. After all, the greatest products of any country were brains and muscle, and in the healthy development of these the success and prosperity of any industry must be looked for. By such gatherings as he then had the privilege of addressing, where men engaged in a great industry met not necessarily for the discussion of business, but for the frank and open interchange of views, it was hoped they would be enabled not only to maintain their own industries on lines of control fair alike to capital and labor, but also that they might conduct business between one country and another on lines equally honorable and straightforward, at the same time doing something to develop the best interests of trade. With a better understanding of each other, they would recognize that, while devoting their best intelligence and efforts to doing what they properly could for themselves, they were engaged in a world-wide commercial undertaking, and just as they were anxious to avoid national wars, so they would be anxious to avoid trade wars. That was the common interest of all, and he expressed the hope that such a gathering of representative men as he was addressing would be productive of fruitful results in the direction he had indicated.

Judge Gary's Plan.

Judge Gary, in responding, said: "For your very generous reception and for the kind words which have been spoken concerning the President of our country I beg to express grateful appreciation. I have been requested to speak briefly concerning the iron and steel trade of the world. It is a big subject to compass in a few words. However, I give heed to the command. If I were to speak interestingly to the manufacturers of steel, I would deal in statistics, and if the figures were given they would do their own talking. The uses of steel are multiplying. The steel business is growing rapidly; the domain of the activities of the business is extending. No one can reliably make a prognosis of the steel business. If we should compare the future with the past, we know that the magnitude of this industry is beyond our present comprehension. The gentlemen connected with this branch of business have a potential influence upon the affairs of the world. That steel and iron are the barometer of trade is a well-recognized fact. As was suggested by his Grace, it is one of the most important of all the lines of commercial activity at the present time, and may I suggest that with the power which those who are connected with this business have there comes a responsibility and an obligation. You, gentlemen, occupy a position which makes it very necessary that your decisions and your conduct shall be such as to assist in bringing about in all respects better conditions for mankind. It behooves us to take an active interest not only in the commercial, but in the civic and political and moral questions of the day. We have it in our power to be influential and successful allies in every movement that is calculated to further the best interests of humanity. We have reached a position which compels us so to conduct ourselves that we may be certain we are above and beyond reproach.

"One of the most important steps which has been taken in the progress of commercial events is the disposition on the

part of those connected with this line of industry to co-operate. Times have changed. We have departed from the old methods of doing business. We have reached the high position where we can help ourselves by helping others. What does co-operation mean? It means the taking of our competitor by the hand instead of taking him by the throat. Not long since men connected with this business actually believed that the only way of reaching success was by making it certain that a neighbor was unsuccessful. It was considered fair and proper and decent and good business to drive a competitor out of business. But that time has passed, and, it is to be hoped, never to return. The man who reaches the conclusion and acts upon the conclusion that he helps himself most when he helps his neighbor is the man who is certain to succeed. Americans have no right to make any agreements of any kind for the division of territory, the restriction of output or the maintenance of prices, or any agreement, express or implied, direct or indirect, that is considered in restraint of trade; and so in America we have been casting about for something that is just as certain of success, and yet entirely unobjectionable. Fortunately, the iron and steel business of America is in the hands and in the control of as fine a lot of men as ever embarked in business—men who have sufficient intelligence to know that the right thing is the best thing, men who have the heart to try and help their neighbors, their competitors, instead of trying to injure them. So for several years we have been co-operating; we have made no agreements, but we have met on such occasions as this, and, with the greatest freedom and entire frankness, have told one another exactly how we were situated, precisely what we were doing, stating fully our conditions, our aims, and even our aspirations, trusting one another as a man would trust a member of his own family, giving his entire confidence to his neighbor, admitting his competitor into his mills or into his offices, taking him and holding him by the hand, and looking him square in the face and saying to him: 'I make no agreements, but I tell you frankly what I am doing;' and so under those conditions and circumstances a man who is placed on that high platform knows that he cannot go out of the office of his friend and competitor and do a mean or dishonest or tricky thing without disgracing himself. When you get a man into a position where even in every-day business life his honor is at stake, you may depend that he will do nothing to bring disgrace or reproach upon himself. It was the old style for men in our country to make agreements to do or not to do a certain thing, with the intention, on the part of some of them at least, of breaking the agreement almost before they got out of the room; but it is one thing to break an agreement where there is a tacit understanding that it probably will be broken, and quite another thing for a man to break an agreement who is placed upon his honor, who has received the confidence of his friend, who has been trusted to do the right thing, so that, as I say, his honor is involved; and if a man has sufficient intelligence to fully grasp the meaning of being placed upon his honor, to deal squarely by his friend, to square his conduct with his words, there is no difficulty in arriving at a solution and in arriving at results which are satisfactory, nay, even profitable, to all concerned.

"Of course, there are those who have not given the matter sufficient thought to believe that this is practicable, who will say that it may be done for a day or a week, but because of the ordinary selfish-

ness of human nature it cannot be possible as a permanent thing. But I say to you, gentlemen, that in our country, with the class of men who have been in the habit of coming together in the circumstances which I have been stating, there is no trouble in securing results that are not only most agreeable and most pleasant, but are very profitable. There is no covert meaning in my statement. I do not mean to suggest it is understood that every man has agreed that he will do, or will not do, a certain thing. Quite the contrary. It is expressly stated that every man is free to do exactly as he pleases; but he is in honor bound, when he makes a statement to his friend, a competitor, that he is doing a certain thing, that he will not change his opinion with reference to that without notifying his friend, and giving him an opportunity of conducting himself accordingly. There are many difficulties in the way always; as applied, perhaps, to the industry of the world it is almost impracticable, but there are difficulties under all circumstances whatever is done, and I might say even whatever is agreed to, if you have an iron-clad agreement. But who expects to reach the period when there are no difficulties, no trials or tribulations connected with the ordinary business affairs of life? We must look to the general average; we must look to the net results. How much better it is if, as a total result, we benefit by the conditions which I have stated, and all the time we know that we are dealing with friends. We cannot escape competition; we ought not to try to escape competition. But there is a marked distinction between healthy competition and destructive competition. This disposition that I have referred to is not confined to America; it extends all over the world. I have corroborative witnesses on every hand. In many places no doubt you have extended the principle much further than we have. As evidence of the truth of this statement, witness this magnificent banquet this evening, presided over by his Grace, attended by representatives from all over the world, enthusiastic in their greetings, becoming the better acquainted, and having full knowledge that, without any agreements between them, they are getting on a higher basis of doing business. Witness the entertainments which have been afforded by the British people on the occasion of this visit. If there is anything about it that would make one suspicious, it is that the English people are trying to get rid of competition by killing their friends with kindness. For all their generous hospitality we are profoundly grateful. We know the strength, the courage and the success of Englishmen; we know something about their business, and we are proud to call them friends. For the motives which bring us across the sea and which influence us to bring us in close touch with our English brethren, look into your own hearts."

Mons. A. Greiner, in responding on behalf of Belgian manufacturers, said for some considerable time the benefits arising from the mere friendly feeling growing up between manufacturers had been very apparent. This feeling had led to an interchange of ideas, thereby proving that a community of interests was absolutely necessary for the furtherance and welfare of the iron and steel industry. In many branches those important advantages had already been achieved.

Great Future of Iron and Steel.

Sir Hugh Bell, responding for British manufacturers, recalled some things he had heard from his father in connection with the steel industry. In the year 1835, when his father was just entering upon his commercial career, the total produc-

tion of Great Britain for the first time reached 1,000,000 tons, and that was about half the steel production of the world. Great Britain continued to occupy that relative position for some 40 years or more, for it was not until 1877 that her position began to be assailed by others. What alarmed his father at that time about the iron trade was the enormous production, and he was at a loss to know what became of it all. The total production of the world at that time was 10,000,000 tons. The present production was 64,000,000 tons; and, greatly daring where Judge Gary feared to tread, he ventured to say there was more prospect of there being a dearth of iron in the future than a surfeit, for in his belief only the beginning of the use of iron throughout the world had been reached. His father used to say that if each of the inhabitants of Africa would only use a tenpenny nail the iron trade would be prosperous beyond the dreams of avarice. A line of railway had been stretched across the African continent since those words were uttered, and that was only the first of many to follow. The president had dwelt upon the position manufacturers might occupy in relation to their competitors, and he congratulated Judge Gary upon the admirable sentiments that had fallen from him on the subject. He had lived long enough to see Great Britain ousted from the premier position in the iron trade of the world into the third place, and he had not been envious of his neighbors—he had rejoiced in their prosperity. Half a century ago, when it was his custom to visit German works, he saw that most of their machinery had been built in Glasgow or in or near Manchester; but when his friends from Germany now visited British works they found that some of our machines had been made in Düsseldorf or in Berlin. Could anything be better than that? The interchange of knowledge enabled all to enter into the field of competition under the best conditions possible. The great mistake that was commonly made was that there was not enough trade to go round. There was plenty of trade to go round, and the more prosperous the world was, the more trade there would be to be divided among all. It was in the spirit that he had expressed that those present had assembled at the banquet, and it was indeed a unique gathering. Of the 64,000,000 tons the world produced, he estimated that nearly 60,000,000 tons were represented in the room. Their industry lay at the root of all prosperity. Nobody started to do anything without wanting their manufactures. No enterprise was begun without requiring iron and steel manufactures, and was the world not going to require all they could do in the future, as it had required all they could do in the past? He, for one, looked without envy on his friends in America and Germany and all other parts of the world where iron was produced, and he rejoiced in their prosperity, because he believed it to be a sign of his own.

Baron von Bodenhausen of the Krupp Works said he was glad to have the opportunity of welcoming on this side of the ocean the visitors from America. Of what immense value it was for all of them in business to engage in personal intercourse had often been stated, and could not be stated often enough; and, as long as there was any steel industry in the world, what Judge Gary had been doing to promote good feeling between all those who engaged in the iron and steel business would never be forgotten. That business was the basis of nearly all other industries, and therefore, when Judge Gary led the iron and steel industry in that direction, he showed the way to all the other industries. He

hoped the day would come when they would all follow the example. If that were to happen, it would be for the benefit not only of their particular industries, but to a great extent also of the countries to which they belonged. It was certain that frequent intercourse between industries, as well as between nations, must necessarily tend to bring them together, must wipe away all sorts of hostile feeling that might have sprung up, and by and by do away entirely with any of those unhappy misunderstandings which, between individuals, as well as between nations, sprang up from time to time.

Sir J. E. Johnson-Ferguson, on behalf of the committee of the Iron and Steel Manufacturers' Association of Great Britain, said that it had often been said that as nations became better acquainted the danger of war would diminish. Whether that was so or not, he would not hazard an opinion, but there were many on both sides of the Atlantic who thought that the better acquainted those engaged in the same or allied trades were with one another, the easier would it become to avoid friction and to settle the infinite variety of questions which, though small in themselves, did so much to cause inconvenience to the concerns interested and to their customers. If there was anything in that view, was it to be wondered at that, at a time when the two great English-speaking peoples were trying to arrange by treaty a method of settling differences that might arise between them, those who held the opinion he had mentioned should desire to give effect to it, and should avail themselves of the presence of friends from America and the Continent, brought to England by the festivities that had surrounded the coronation? That, shortly, was the history and purpose of the banquet. It had been stated that it was a deeply-laid scheme to put an end to competition in the iron and steel trades of the world. But nobody knew better than they did that competition was the mainspring of commercial success, and that any industry in which legitimate competition had been destroyed would itself soon become effete. If, by means of that dinner, anything had been done to promote friendship between those in America engaged in the iron and steel industry and those on this side of the Atlantic—between the gentlemen who on such questions thought in millions, while those on this side were content to think in thousands—the purposes of the committee would have been served.

The Rt. Hon. A. Bonar Law said that everything which went to cheapen the production of iron and steel was not only a benefit to those who made money out of it, but it was a benefit to humanity all the world over. One of the great advantages of such gatherings as the one they were attending was the opportunity it afforded to men of different nations of coming into contact with men representing different points of view, and that must be in the interests of peace.

An English Point of View.

The *Iron and Coal Trades Review* of London, which rarely misses an opportunity to criticize the Steel Corporation, in editorially commenting on the matters discussed at this banquet and referring to Judge Gary's speech, takes the following view of the whole matter:

"Excellent as his speech was, it did not carry us further than the similar statement which he made at the first price-maintenance dinner held in London in September, 1908. Further progress has been left to the conference which has been held in Brussels this week. The speeches made last Friday by the Continental representatives, Baron von Bodenhausen,

Mons. Griener and Mons. Dreux, as well as the one made by Sir Hugh Bell, discreetly left Judge Gary's proposals entirely alone. While we in this country have every wish 'to recognize the rights and interests of others,' to use Judge Gary's words, there can be no question that his proposals are not popular with British iron and steel makers. The principles in the abstract are beyond criticism, but their practical application may be almost impossible. Moreover, we have previously pointed out that a suspicion exists in the minds of some that Judge Gary's proposals are designed with a view to increasing the American participation in the export trade at better prices, the fact being that at the present figures such trade is unprofitable to United States producers engaged in it. Whether or not this view is justified, it is obvious that if prices for export could be raised by international agreement it would mean more to the United States Steel Corporation than to any other individual producer. Although the Steel Corporation controls only 50 to 60 per cent. of the total capacity of the United States, it does practically the whole export trade in iron and steel from America. There are exceptions, but they are so small as to merely prove the rule. The American exports are now at the rate of about 2,000,000 tons per year. Consequently an average increase of £1 per ton would mean two millions sterling a year to the United States Steel Corporation, with a possibility that at the higher price it could enter the export trade on a much larger scale. Further, the cost of production in America is increasing, and it is fair to assume that American exports would at the present time be on a much more limited scale if it were not that the United States Steel Corporation can distribute any loss on export over the huge tonnage made for home consumption. As the United States have a capacity of between 33,000,000 and 34,000,000 tons, and the normal demand at the present time may be taken at not much over 25,000,000 to 26,000,000 tons, another 2,000,000 tons of exports would be of material assistance in making up the leeway and in helping to ensure not only higher prices in export trade by agreement, but also in the home market. * * * It would be very interesting to know the precise occasion of the United States Steel Corporation's increased activity in the international markets. In 1900 its exports amounted to only 1,001,157 tons, increasing in 1910 to 1,216,057 tons; but this chiefly by reason of heavier exports in the closing months of that year, and increasing further this year to a rate of 2,000,000 tons or more. Of course, business is not good in the United States. In 1908, however, it was not good, either; it was very much worse than it has been of late, but from 1907 to 1908 the Steel Corporation's exports decreased from 1,014,014 tons to 777,276 tons. The Corporation has not improved its position since 1908 in the matter of production costs. It slightly advanced wages in 1900, and it has made no special changes in processes at the plants from which it exports. It has brought the Gary plant nearer completion, but that is a plant very far inland and makes no export material whatever. Possibly the suggestion will arise from some quarters that one of the objects of the sudden activity in the export trade has been to manufacture a sentiment among the producers of other countries favorable to a patient hearing of the American plans at the Brussels conference.

"Mr. Gary's figures prompt some other interesting reflections. He says that the Steel Corporation's production was at the rate of 68 per cent. of capacity. The

latest blast-furnace returns show production in the United States by all interests, including the merchant blast furnaces, at the rate of about 23,000,000 tons per annum. Taking the total capacity of the country at about 34,000,000 tons, this shows 68 per cent. of the capacity in operation, just the Steel Corporation's percentage, and all current reports indicate that, as a rule, the Corporation and the 'independents' operate at about the same percentage of capacity, the business, by one means or another, being divided pretty evenly. The 'independents,' however, produce only for the domestic market, whereas the Steel Corporation's production includes its output for export purposes. The last annual report of the Corporation indicates that the output of finished products in 1910 was 10,727,751 tons, and that this was 80 per cent. of 'normal maximum capacity,' which would indicate the latter at 13,400,000 tons. There has probably been a material increase since then, but we shall not be far wrong in taking 13,500,000 tons as the Corporation's capacity, and 68 per cent. of this is 9,200,000 tons. From this we deduct the 2,000,000 tons of export business, leaving 7,200,000 tons, which is only 53 per cent. of the capacity. In other words, the United States Steel Corporation submits willingly or otherwise to the 'independents,' operating at 68 per cent. of their capacity, exclusively on domestic business, but itself operates at 68 per cent. by running 53 per cent. on domestic business and 15 per cent. on export business, receiving much smaller profits per ton on the latter than on the former. As the 'independents' cannot or do not wish to conduct an export trade, it is very kind of the Corporation to make up its own quota in this way."

King Lime & Fertilizer Co.

The King Lime & Fertilizer Co. of Brevard, N. C., which was incorporated recently with \$250,000 authorized capital stock, has organized and plans to develop lime properties near Brevard. It plans to construct a three-mile railway and a battery of about six perpetual limekilns, with one or more large stone crushers and accompanying equipment, all to cost about \$125,000. Correspondence regarding machinery should be addressed to C. C. Good, care of Greenville Trust Co., Greenville, S. C. Officers of the new incorporation have been elected as follows: President, R. Mays Cleveland of Marietta, S. C.; vice-president and treasurer, C. C. Good; secretary, J. D. Good, both of Greenville, S. C. These officers and T. H. Shipman and R. L. Gash of Brevard are the directors.

Osceola Fertilizer Plant.

Referring to its plans for a plant, the Osceola Fertilizer Co. of Jacksonville, Fla., wires the MANUFACTURERS RECORD as follows: "Capacity, 30,000 tons annually; frame buildings; Hugger Bros. of Montgomery, Ala., contractors; building materials purchased and nearly all on the ground; machinery contracts all placed. Will operate in South Georgia, Florida and Cuba, and will be in operation not later than September 1." This company was organized recently with W. H. Cody as president.

Wants Consulting Engineer.

D. A. Overby, president of the Crystal Ice & Power Co., Danville, Va., under date of July 12 writes the MANUFACTURERS RECORD:

"I will thank you to give us the name and address of a consulting engineer who is competent and reliable. My object is to get information relative to cold storage and ice-making."

Pointed Tariff Questions by Southern Manufacturers

[Special Correspondence Manufacturers Record.]

Charlotte, N. C., July 18.

An important meeting of the tariff committee of the American Cotton Manufacturers' Association was held here today, with Mr. R. M. Miller, Jr., chairman of the committee, presiding. It was decided that the following letter, signed by Mr. Miller, be sent Congressman O. W. Underwood, chairman of the House of Representatives Ways and Means Committee, stating in a comprehensive way the position of the tariff committee on proposed legislation relating to schedule I, cotton manufactures:

"As instructed by the tariff committee of the American Cotton Manufacturers' Association, which met here in Charlotte today, I have the honor to reply further to your favor of the 6th inst., stating our position on proposed legislation relating to schedule I, cotton manufactures, as follows:

"We are opposed to any revision that will increase the percentage that now exists of importation to total manufactures.

"In figuring percentages of importations to manufactures we call attention to the fact that importations under the cotton manufactures schedule were 17 1/4 per cent. of the total cotton manufactures for the year 1910 in the United States, including laces and other such luxuries that are not as yet made in great quantity in this country, although it is interesting to note that the manufacture of laces in the United States increased in value from \$3,500,000 in 1900 to nearly \$10,000,000 in 1910.

"We believe that any way it may be considered, the present importations are sufficient to protect the consumer by regulating prices, for there is no monopoly or restraint of trade, but, on the contrary, the keenest competition among cotton manufacturers in the United States.

"We do not believe that anything more regulative of prices can be secured, however much importations may be increased, for American manufacturers are already down to cost, and without radical cutting of wages, which is not believed could or should be effected, the chief result of legislating more foreign goods into this country would be only to transfer that work to foreigners, for importers do not usually undersell a local market except enough to bring in their goods.

"We believe that the cotton schedule bears its share of the customs revenue for the support of the Government, and that there is no call for increasing the amount collected under it.

"We are opposed to revision without adequate data.

"We offer our assistance in obtaining such data.

"We are in favor of such revision as will protect all classifications under the schedule primarily in proportion to their labor costs, and are especially in favor of simplification of the schedule.

"We are opposed to any revision that does not take into account differences in other conditions as well as labor costs, particularly on account of Southern mill conditions.

"We are opposed to reductions of duty on machinery and other items entering into the cost of mills, except such as will keep them on a parity with our own industry as to labor and other costs at home and abroad. We do not want our property depreciated, nor do we want broadly to injure other industries to help our own.

Let each case rest on its merits and benefit equally.

"We are opposed to personal hearings. Too often it has been alleged that unfair advantage has been taken that way in making the tariffs of the past.

"We are in favor of publicity and record, and of the freest and most open discussion and consideration of everything relating to tariff-making.

"We demand that the data upon which revision is based be made public and a matter of record except with such concealment of names that good faith dictates with those furnishing data. If publicity is good for other things, and we believe it is, it certainly is desirable in such a vitally important matter as the tariff.

"We also demand a definite statement as to just what it is intended by its makers that the revision shall accomplish:

"(a) What measure of protection is it intended to afford to American cotton manufacturers—equality in labor cost only, equality in cost of production, or what?

"(b) How much relative increase or decrease is intended in importations, which means how much more or less competition is it intended to impose upon us?

"(c) If more competition, how are we expected to meet it?

"(d) If we are expected to cut labor, how is that labor to be compensated for the reduction and what can it definitely expect in lesser cost of living to offset the cut?

"(e) What amount of revenue is the proposed new tariff on cotton manufactures expected to yield?

"(f) What reduction is expected, if any, in the cost of articles of cotton manufacture to the consumer at retail stores?

"We ask consideration of the above in the spirit in which it is offered. We intend no reflection; we merely ask to have our way pointed out by those who make the way. We ask that it be borne in mind that our industry directly concerns 2,000,000 people, and indirectly many more; that we are not simply manufacturers and employes asking protection for our property and our labor, but that we are consumers, and that we are citizens most of whom voted for the party proposing this revision, and who expected not only that any revision would be made with as much prudence as would be exercised in private business matters, but also that they would be conducted with all the publicity that was generally promised among other reforms."

The tariff committee appointed is as follows: Messrs. R. M. Miller, Jr., chairman, Charlotte, N. C.; D. Y. Cooper, Henderson, N. C.; Stuart W. Cramer, Charlotte, N. C.; A. H. Bahnson, Fries, Va.; Lewis W. Parker, Greenville, S. C.; James D. Hammett, Anderson, S. C.; J. H. Morgan, Greenville, S. C.; C. D. Tuller, Atlanta, Ga.; Thos. I. Hickman, Augusta, Ga.; Scott Maxwell, Cordova, Ala.; L. D. Tyson, Knoxville, Tenn.; T. L. Wainwright, Stonewall, Miss.; Paul J. Marrs, Henderson, Ky.; A. W. McLellan, New Orleans, La.; J. C. Saunders, Bonham, Tex.

Among those present today were the following: Stuart W. Cramer, R. M. Miller, Jr., S. B. Tanner, A. J. Draper, E. A. Smith, George B. Hiss, J. S. Weir, W. S. Lee, C. B. Bryant and R. L. Tate, all of Charlotte, N. C.; W. W. Moore, Rock Hill, S. C.; T. I. Hickman, Augusta, Ga.; B. B. Gossett, Williamston,

S. C.; A. H. Bahnson, Fries, Va.; J. H. Morgan, Greenville, S. C.; A. P. Rhyne and C. E. Hutchinson, Mt. Holly; James D. Hammett, Anderson, S. C.; Mr. Roddy, Rock Hill, S. C.

J. LOUIS SPENCER.

REINFORCED CONCRETE BARGES.

New Type of Vessels Will Be Built in Baltimore.

The 86-ton concrete barge that has been used for several weeks by the Arundel Sand & Gravel Co. of Baltimore has proven such a complete success that the president of the company, Frank A. Furst, has become an enthusiastic advocate of this form of construction for scows and barges. Mr. Furst has had the barge tested in every practicable way necessary to prove its value. It is constructed of concrete, with reinforcing rods appropriately distributed throughout the hull, deck and bulkheads. He found it strong and at the same time possessing sufficient flexibility to withstand heavy and sudden shocks without damage. He stated to a representative of the MANUFACTURERS RECORD that the amount of rough treatment that the barge would stand was a revelation to him. A mass of over six tons weight was dumped into the barge suddenly without any signs of undue straining or any damage whatever.

In view of the apparent seaworthiness of such boats, Mr. Furst has decided to build several barges of capacities up to 400 and 500 tons for use on his various dredging operations and in transporting sand, gravel, etc. With the experience to be gained in the construction and operation of these large barges as a basis, it is probable that he will carry the construction further, eventually forming a company to build them for sale and general use throughout the inland waters of the country. In his wide operations throughout the country in dredging work as head of the Furst-Clark Construction Co. and in the heavy handling of sand and gravel by the Arundel Company, Mr. Furst is in a position to build many boats for his own immediate needs.

The economy in construction and in upkeep are strong points in their favor, as well as the reliability, freedom from decay, absence of the necessity for frequent caulking, painting, etc., as required by other vessels and the ability to stand the roughest kind of treatment.

Mr. Furst recently stated that he is anxious to secure a desirable location on the water-front for a manufacturing industry to be started in the city, and it is understood that this is with a view to building in the future a large plant for the construction of the reinforced concrete boats.

When the forms for molding the concrete of one barge have been made, they will serve for others of the same size and type, thus reducing the cost of construction where a number are to be built. This is only another illustration of the seemingly endless uses to which concrete work can be adapted.

Better Tone to Birmingham Market.

[Special Cor. Manufacturers Record.]

Birmingham, Ala., July 17.

The feeling of improvement continues in the local situation. Industrial operations are going ahead now at a better rate than they have at any time during the past 90 days, and prospects are good for a splendid production in all lines during the remainder of the year, with actual movement of the goods produced. Some of the producers of pig-iron have withdrawn prices altogether, others are quoting \$10.50 base for the remainder of the year, while still others are quoting at \$10.

Without doubt, however, the \$10 schedule can still be obtained on the part of buyers for shipment during the third quarter. There are some good large inquiries before the market and several nice contracts have been closed during the week just past. There is but little improvement in the way of production of pig-iron, yet at the same time the actual production seems to be moving out week by week. The market is certainly strong at the following schedule of prices for shipment during the next 90 days, all per gross ton f. o. b. cars furnace, Birmingham district:

No. 1 soft and foundry, \$10.50 to \$11.
No. 2 soft and foundry, \$10 to \$10.50.
No. 3 foundry, \$9.50 to \$10.
No. 4 foundry, \$9.25 to \$9.75.
Gray forge, \$9 to \$9.50.
Mottled, \$8.75 to \$9.25.
Basic, chill cast, \$10 to \$10.50.
Charcoal car-wheel iron, \$22.50 to \$23.

It seems a very well-settled fact now that the United States Cast Iron Pipe & Foundry Co. has practically completed arrangements for taking over the plant of the Dimmick Pipe Co., North Birmingham, which has been idle for the greater portion of the current year. Whether or not this plant will be put in operation at once remains to be seen. In fact, the reported purchasers have given out no information whatever as to any plans for the future in connection with this reported purchase. Several inquiries for small lots are before the trade, and one or two large-sized contracts have been closed up for shipment to the West. The actual placing of the pipe-line requirements from the Fayette oil fields has not yet been done, but no doubt this contract will soon be let, and the makers of cast-iron water pipe are very hopeful that their goods will be specified. There is no change in quotations on cast-iron water pipe, and these figures remain as follows per net ton f. o. b. cars foundries here: Four-inch to six-inch, \$22; 8-inch to 12-inch, \$21; over 12-inch, average \$20 per ton, all of which is for class "B" pipe. Class "A," or gas pipe, is quoted at \$1 per ton above the class "B" price, with specials bringing \$55 per ton.

There is but little to be said in the old-material market; in fact, scrap-iron dealers report conditions as far from satisfactory at this particular time. As a matter of fact the accumulation of scrap in dealers' yards is not so large, but it is known that a number of railroads of the South are figuring on disposing of the accumulation on their yards at an early date, and dealers are much interested in these proposed lettings. At this writing dealers' asking prices are quoted nominally as follows per gross ton f. o. b. cars here:

Old iron axles, standard, \$15.50 to \$16.
Old iron axles, small, \$13 to \$13.50.
Old steel axles, light, \$13 to \$13.50.
Old steel axles, standard, \$14 to \$14.50.
Old iron rails, \$13 to \$14.
No. 1 railroad wrought, \$11.50 to \$12.
No. 2 railroad wrought, \$8 to \$8.50.
No. 1 country, \$7 to \$7.50.
No. 2 country, \$6.50 to \$7.
No. 1 machinery, \$8.50 to \$9.
No. 1 steel, \$9 to \$9.50.
Standard car wheels, \$11 to \$11.50.
Tram car wheels, \$8 to \$8.50.
Light cast and stove plate, \$7 to \$7.50.

The Texas Industrial Congress, with headquarters at Dallas, is circulating a county map of Texas, showing by counties the number of entries in competition for the \$10,000 in gold offered in prizes by the congress for the best yields of corn and cotton in the State this year. There are 160 counties, represented by 772 men, 13 women, 901 boys and 60 girls, a total of 1746.

Motor Trucks in Haulage Problems in the South.

By ROLLIN W. HUTCHINSON, JR., M. E., Transportation Engineer.

In the South we have so long depended upon the "old mule" as the purveyor of commodities of commerce to our customers or to and from the warehouses of our common carriers that we have not yet awakened to the fact that for a large number of conditions in haulage work the mule is an anachronistic animal. We are accustomed to compare any other type of haulage agent on the basis of "Is it better than a horse?" just as we speak in weights and distances, and for an answer we only get a guess if we have not equated the horse standard to specific cost and definite time. Minutes or hours and dollars in all businesses should be our measuring rules of efficiency and conservation.

In considering the advantages which the auto-truck or delivery wagon can confer to any business or industry we must remember that an analysis must be made of one's transportation problems to determine whether the disestablishing of the mule and horse system will make for greater efficiency and economy in time and dollars. Unless the power truck will save one money in the end or protect one's custom better than otherwise, it is unwise to adopt it. In the future the benefits which the power wagon will confer to many industries and businesses will be recognized by the business world as being broader than the mere saving in dollars and cents and time. The advantages of the power truck used in its proper sphere are broader than the utilitarian advantages of efficiency, economy, quickness in covering distances, etc., which the motor truck possesses by an overwhelming majority over the horse-drawn truck. Until, however, the power truck is given its full measure of appreciation along the lines above outlined we must apply our dollars-and-time-measuring rule when considering the subject of substituting the auto-truck for the animal truck.

Every business man having draying or the moving of material or the delivery of goods should inform himself what a power truck will do for him. The motor truck is not for the man who has work for but one horse or for two horses, because they as two units are better in many instances than one motor truck, but that is a problem for you to be sure about before you buy. Every business man or firm that is now using several horses, an experiment in his business with a motor truck which has been purchased on the same basis as any other high-class machine is purchased—a careful investigation of the reputation of the maker and the service which his product has given other firms having haulage problems.

Undoubtedly the biggest obstacle to proper consideration of the installation of the auto-truck in solving haulage problems is the fact that very few concerns which have use for many horse-drawn vehicles have even a crude cost system upon that part of their business. They are content to lump their haulage or stable expenses at so much cost, generally an arbitrary figure guessed by their stable boss or traffic man with the aid of the book-keeper. This arbitrarily fixed "necessary" outlay to do the transportation business has thus prevented the logical users of power trucks from comparing the utility of an auto-truck in the haulage end of their business. Wherever the actual, and not theoretical, cost of animal and power truck haulage is known, and not assumed, the power truck has remained, and has in the majority of instances multiplied.

The textile industries of our section

especially have drayage problems which are constantly growing more serious. A great number of the textile mills in the South have for reasons of economy in sites, reduced taxation or to develop a cheaper source of power through the means of hydro-electric transmission, been located away from railroads and in some instances must transport their raw and manufactured products to and from points of shipment which is often measured in miles instead of a few hundred feet. The raw materials are sometimes bought from the growers in the immediate vicinity of the mills and delivered by them to the mill, but it is rarely the case that enough cotton can be advantageously purchased in this way to supply the needs of a factory, and the supply must usually be bought from a cotton broker or warehouse factor in the nearest town or city. As the cotton is usually bought on the basis of the mill doing the transportation of the purchased raw material at its own expense, the present method is to haul the cotton by means of two or four-mule teams. As only two to ten bales can be pulled at one load, especially if there are steep grades or heavy roads, and the speed of haulage rarely exceeds three miles per hour, the delivery of cotton in this manner, even when the distance is relatively small, is not only slow, but is inefficient and expensive.

It is in these cases, and in hauling all other supplies, that the power truck can find its most logical and useful applications in the textile industries. A high-class gasoline power truck will do the heavy haulage with incomparably higher efficiency and at from 30 to 50 per cent. less operating cost than a fleet of mule teams will require for maintenance. Big tonnage is "candy" for a good, practical motor truck. Instead of employing four four-mule teams to haul, with their combined capacities say 30 bales of cotton per trip, is it not far more economical and speedier to use one seven-ton auto-truck and carry the 30 bales of cotton at one trip at a speed of 8 to 10 miles per hour? It must be remembered, however, that unless the haulage work required of an auto-truck is sufficient to keep it constantly in service at approximately its rated load capacity in that its maximum efficiency as a transportation machine cannot be gained. Long hauls with reasonably big loads (but not overloads) are the fields of action in which the gasoline auto-truck glories. A high-grade auto-truck of seven tons load capacity will cost, for instance, from \$5000 to \$6500 equipped with a special body for carrying a bulky load like baled cotton or baled manufactured goods. An analysis of the investment and the operating charges for a six-and-a-half-ton truck based on the experience of a large warehouse company which handles baled domestics to a very large extent showed the following figures:

Investment.	
Seven-ton truck (with extra large body).....	\$6500 00
Number of days operated per year.....	300
Number of miles operated per day.....	40
Total miles per year.....	12,000
Operating Expenses.	
Interest on \$6500 at 5 per cent.....	\$325 00
Depreciation at 5c. per mile.....	600 00
Maintenance at 5c.....	600 00
Tires at 8c. per mile (guaranteed).....	960 00
Gasoline at 11c. per gallon.....	12 75
Oil at 40c. per gallon.....	15 00
Grease.....	12 50
Insurance.....	225 00
Driver at \$20 per week.....	1040 00
Garage charges, washing, etc.....	275 00
Total cost per year.....	\$4065 25
Total cost per day.....	\$13 55
Total cost per mile.....	22
Total cost per ton-mile.....	075

This analysis is based on a large ter-

minial warehouse company's experience, which has to deliver to and from wholesalers, textile products packed in heavy bales, and the figures apply to a make of truck which is perhaps the highest-priced on the market, but which is claimed to be the cheapest in operating cost. In presenting these figures the writer has chosen for illustration a machine which has been on the market for 10 years, and which is conceded by truck experts to be one of the highest developments of the freight automobile manufactured. It should be remembered that while the initial investment for a power truck of the type mentioned is apparently large, it is not first cost, but operating cost, that should be the first consideration in the purchase of a business vehicle.

Naturally the first question the prospective purchaser of a motor truck wants to know is "How much will it cost to run?" to which question no honest salesman of a truck can answer more intelligently than "it all depends." It is regrettable true that there is no really satisfactory or equitable basis which enables the performance of any motor truck to be compared with that of any other motor truck, but a thoughtful analysis will prove this to be a fact. Every performance of an auto-truck is individual. Figures on operating cost of power trucks for similar classes of haulage are vitiated by one or more of the following causes: Differences in the facilities and method employed in garaging, wide differences in road conditions and the grades encountered, wide variations in the kinds of roads to operate over at different periods by the same truck, differences in speeds, and the very important matter of the character of driver employed.

Dependable data on auto-truck operating expenses are in as much need by motor truck manufacturers as they are by the individual, who is keenly desirous of checking his own drayage data against standard data. Present conditions do not permit this being done, and will not until all the attendant circumstances are known.

Overloading and overspeeding are the greatest drawbacks to the proper advance of the power truck in modernizing haulage systems. Regardless of what material a truck may be constructed, overloads and over speeding will soon run up its maintenance and operating cost excessively. There is no class or kind of self-propelled vehicle which receives the strains, the abuse and neglect that the average power truck does. In general the trucks that now fail are those that have been neglected. And the worst thing is that it is so unnecessary to do this. The locomotive, for instance, our oldest self-propelled vehicle, and hence the highest developed, is protected from shocks to its internals by running on steel rails and scientifically constructed roadbeds. It is only expected to run some 300 miles before going to the roundhouse, where it is cooled off, inspected critically for damages or defects in its machinery. It must be in approximately perfect condition before it is put on another run. The power truck, on the other hand, is just in charge of an ex-teamster, without knowledge of machinery, who is entrusted with the care of a high-class business machine with only the crudest conception of his duties.

No business man would think of putting a green teamster in charge of the electrical and mechanical apparatus of his power plant; yet it is just as consistent to put an inexperienced teamster in charge of a road locomotive, which is really what an auto-truck is.

Mileage does not hurt a truck, but overloading and overspeeding will break its back. It is not first cost which the sensible buyer looks at in investing in a power

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truck. Lasting qualities, low cost of maintenance and operation are, or should be, the determining criterion in buying a commercial motor car. One should not invest in a power truck without knowing his requirements. Some concerns will buy a 1½-ton truck when they really need a 3-ton truck, but they will expect the 1½-ton truck to do the duty of a 3-ton car by overloading it to its last limit. Unlike the horse, the power truck needs no rest. It will work 24 hours per day if you want it to, and its operating cost ceases when it is not on duty. But a truck, like a locomotive, deserves and should have roundhouse duty from a mechanic if its useful life and satisfaction to its user are to be conserved. To get the ton-mileage out of a truck, which is the thing that reimburses you, you must do something more than merely sign your name to a check, fill the gasoline and oil tanks, put water in the radiator (or charge the batteries with electric current) and turn on the power. A truck intelligently selected can always be made to pay, but its purchase will often necessitate a rearrangement of the customs and habits which now obtain with respect to horse haulage.

Whether or not a motor truck can be profitably used in any particular line of business is a problem that must be thoughtfully worked out and decided entirely upon the peculiar circumstances surrounding the kind of drayage involved.

The future uses of the motor truck in interurban service is largely dependent upon good roads development. We already have the practical motor truck, and the next few years will see a decided progress in some makers' product. No really rapid advance in the utilization of power trucks can obtain until good roads become more general.

There are in operation at present not less than eight lines of "truck freight railways" working on regular schedules between towns. In perhaps six months a regular line of freight automobile service will be in use between New York and Boston.

As the South has unusual transportation problems on account of lack of common carriers, the coming of good enough roads to run trucks on will solve the great problem of freight transportation between towns away from railroads and of industries remotely situated from shipping points. The present agitation for good roads will accomplish much to hasten the time when the South can use the motor truck and modernize its haulage problems extraneous to purely urban and suburban service, for which the power truck is now splendidly adapted.

New York.

Activity at Corey.

Mr. Robert Jemison, Jr., president of the Jemison Real Estate & Insurance Co. of Birmingham, who is interested in the industrial residential city of Corey, adjoining Ensley, Ala., writes to the MANUFACTURERS RECORD:

"Corey is very active, as larger forces than ever are at work on the by-product plant, and a very large number of houses are being constructed all over the town. The Tennessee Coal, Iron & Railroad Co. is building 30 houses and the Corey Land Co. 15 houses, and a number of individuals are also building houses. We look for even greater activity during the next 30 days."

Mr. O. P. McPherson of Gloster, Miss., is president of a company which proposes to establish, under the auspices of the Woodmen of the World, a health and pleasure resort near Gloster, according to a letter to the MANUFACTURERS RECORD from Mr. McPherson.

Lower Pecos and Toyah Valleys of West Texas.

By CHARLES E. TRIMBLE.

The Lower Pecos and Toyah valleys embrace nearly 3500 square miles. These valleys lie in Pecos, Reeves and Ward counties, which have an estimated total of nearly 4,000,000 acres susceptible of irrigation, and with about 65,000 acres now under cultivation and irrigation. As one travels from North Texas via the Texas & Pacific Railroad one passes through some 20 country towns and villages. Notable among the larger towns or cities for their air of prosperity, civic attractiveness, good town and country roads and substantial buildings are Weatherford, Abilene, Midland and Big Springs. From the attractiveness of these towns or cities one passes into Winkler county, the vast territory of the far-famed cattlemen of the West. One travels for 40 miles over this plain, and afterwards comes to Pecos.

And what about Pecos? Five years ago it was a cattle ranch almost unknown and unthought of. Had it not been the county-seat of a county as large as an ordinary New England State it would not have been

years includes the following: \$20,000 alfalfa feed mill; modern steam laundry; \$75,000 light and ice plant; State experimental irrigated farm station, and long-distance telephone company; donated \$100,000 for third railroad, now completed 46 miles; guaranteed \$75,000 for fourth railroad; met Andrew Carnegie's conditions for \$10,000 library to be constructed; built \$25,000 high-school building, now nearing completion, and secured \$30,000 Texas & Pacific depot, now under construction; 24-room five-story office building, now under construction; three brick store buildings, now under construction; new county jail, under construction; voted general sidewalk law; \$250,000 new buildings constructed and under construction in past 24 months; raised \$30,000 for Baptist church, \$15,000 Christian church and \$18,000 Methodist church.

Pecos has a population of about 3000, growing so rapidly that at least 10,000 people will be in the city in the next three or four years. It is the terminus of the



PECOS RIVER NEAR FORT STOCKTON, TEXAS.

even then what it was. But today Pecos is a prosperous, growing city, alive with energy, optimism and success. Secretary Porter A. Whaley, the live and efficient secretary of Pecos Commercial Club, talked for three hours to a MANUFACTURERS RECORD correspondent about Pecos and the marvelous possibilities of the great irrigated section now coming into being around Pecos. Mr. Whaley spoke of Pecos' raising \$100,000 as a bonus for the building of the Pecos Valley Southern Railway as if it were just an ordinary thing. He said that Pecos wanted a railroad to the Davis Mountains through a newly-developed irrigated section. Pecos advertised for someone to build and then gave \$100,000 herself to secure it, and went out and secured \$90,000 more from land-owners along the line of the road. The road is now in operation 46 miles, and is to be extended south to the Southern Pacific and later to the northeast to Oklahoma City. This gave Pecos its third railroad. Pecos had hardly finished paying its great railroad bonus when it turned around and offered \$75,000 cash and right of way through two counties for a fourth railroad toward San Antonio—and prospects are good for this road. A summary of development in the past three

New Mexico main line of the Santa Fe Railway system, is the terminus and general headquarters of the Pecos Valley Southern Railway, and also has the main line of the Texas & Pacific Railway. Three other railroads have been chartered to build into Pecos, one toward San Antonio, called the Palacios, San Antonio & Pecos Valley Railway, now under construction east of San Antonio; another, called the El Paso, Pecos & Oklahoma City, and a third, styled the Rock Island, Texas & Pecos Railway. Nothing has been done on the last two named roads up to this time. That lines will be built in the directions as chartered is a foregone conclusion. Pecos is now doing a great wholesale business. The figures for last year showed a wholesale business exceeding \$2,150,000, while the city does an enormous retail business. It is the business center of a trade territory 250 miles in all directions. Railroad freight receipts exceeded \$400,000 last year.

What is the cause of this wonderful transformation which is making a city out of Pecos and calling into existence the development of a section of country which bids fair to rival California in its productivity? Answer—fertile land and an abundance of good water, which is being

brought to the surface by force pumps and distributed over raw land. Forty-nine pump outfits, each watering* from 80 to 400 acres of land, have been put in and contracted for at an average cost of \$1100 each during the past eight months. What the record will be next year no one knows. This year saw the start, and wonders have been accomplished. If 500 such outfits go in next year it will mean that 25,000 acres of additional land, worth at least \$100 an acre, will be brought under cultivation—and few people estimate less than 500 outfits for next year. It is simply a question of getting the work done. It will mean also about \$600,000 expended in putting in the plants. About \$140,000 has been spent in the past year as a beginning in this work. Last year about 5000 homeseekers visited Pecos Valley, most of them going through the Pecos City gateway. About 40 per cent. purchased lands and about 20 per cent. of the purchasers have begun to develop the land, the balance are waiting for higher land prices, something the keen-sighted Pecosites is trying to keep down. Ten years will see such an advance as must surprise even the most enthusiastic land boomer of today. There are in this connection about 10 live real estate firms operating in Pecos alone. The Coley & Layne Company of Houston and Pecos are among the pioneers in the pumped water irrigation field. This company has for months had a force of 15 to 40 men at work putting in wells and outfits, and they have brought in a large number of big wells, one pumping about 2000 gallons of water per minute. This will irrigate about 700 acres of land, giving the land the equivalent of 39 inches of rain per annum during the eight months growing season. To this should be added the annual average rainfall of about 13½ inches. Mr. Coley stated that he believes the country is so bountifully supplied with a vast underground water basin as to be practically inexhaustible. Mr. Coley has operated in various parts of the valley, and everywhere has found conditions better than expected.

Compressed air pumping has for years been in successful use for factory and municipal water supply. In the last two years the Indiana Air Pump Co. of Indianapolis has turned its attention to the irrigation field as well. The company has maintained Texas headquarters at San Antonio, and has just opened a new West Texas office in Pecos. The first plant installed here is on the farm of F. L. Fisher, 17 miles south of Pecos. Mr. Fisher's well is 165 feet deep, and the water stands 50 feet from the surface when the pump is running. The casing is only six inches in diameter at the water strata, and is eight inches in diameter at the discharge.

F. W. Johnson, president of the Pecos Commercial Club, president of the Pecos Mercantile Co., president of the First National Bank of Toyah, president of the Citizens' National Bank of Barstow, president of the Pecos Light & Ice Co. and president of the Pecos Land Co., is the father of Pecos Valley development. On the streets of Pecos almost daily he tells of the country as he has seen grow from a wild no man's country 21 years ago to what it is today—the beginning of a great irrigated agricultural section. Pecos Valley development is just beginning, and to Mr. Johnson belongs no small part of the credit. W. D. Cowan, president of the Pecos Valley Bank, has been an able partner of Mr. Johnson in actively pushing to the front this wonderful country. Such men as J. W. Moore, R. S. Johnson, C. W. Goedeke, R. M. Harkey, Jim Goode, W. S. Pawkett, Peter Goodloe, J. G. Love and others have actively assisted in promoting the agricultural welfare of the country.

While the greater development around Pecos is from artesian and pumped wells, the following include some of the larger river and lake irrigation companies:

	Supply.	Miles main canal.	Miles later- als.	Acres in irriga- tion.	Acres under canal.	Approx- imate cost.	Work done.
Fort Stockton Lands Co.....	Spring	30	300	2,000	30,000	\$150,000	25%
Imperial Irrigation Co.....	River	15	30	.....	45,000	300,000	20%
Clark Company.....	River	7	8	600	1,000	.....	80%
S. V. Biggs Company.....	River	15	20	5,000	14,000	.....	75%
Toyah Valley Grape & Alfalfa Co....	Creek	5	10	1,000	3,500	.....	90%
Barstow Irrigation Co.....	River	25	100	10,000	30,000	.....	90%
Farmers' Independent Canal Co.....	River	13	.....	10,500	18,000	50,000	60%
Red Rock Canal (Zimmerman).....	River	47	30	4,300	21,000	84,000	50%
Big Valley Irrigation Co.....	River	15	30	.....	15,000	68,000	85%
Arno Co-operative Irrigation Co.....	River	14	00	2,000	15,000	350,000	70%
Orient Irrigation Co.....	Toyah L.	68	250	.....	76,000	750,000	35%
Grand Falls Mutual Irrigation Co....	River	36	200	14,000	30,000	300,000	90%
Porterville Canal Co.....	River	18	32	4,000	30,000	215,000	20%
Toyah Valley Irrigation Co.....	Spring	19	45	14,000	30,000	330,000	95%

One of the most interesting experiments in pumping water from deep wells has been conducted by Geo. T. Boyd of Hermosa, eight miles west of Pecos. From an eight-inch well water is lifted 115 feet with an eight-horse-power gasoline engine and a straight cylinder pump. This furnishes 120 gallons of water per minute, and is applied direct to the land without the use of a reservoir at an average cost of \$2.50 per acre annually. Mr. Boyd has 70 acres in cultivation and under irrigation by this process, and the above estimate of capacity and cost are given after three years' experience and observation.

Messrs. Moore & McKee are operating on their property, four miles northwest from Pecos City, a four-horse-power gasoline engine, driving a two-inch centrifugal pump at a cost of 50 cents for each 10 hours, including all expenses. The cost of this engine and pump, with well complete, was \$450, and furnishes 425 gallons of water per minute with a 34-foot lift. This plant furnishes sufficient water to properly irrigate six acres of alfalfa, 1700 grapevines, 1700 fruit trees and five acres planted to garden truck and vegetables, including melons and Irish potatoes, a total of 20 acres.

John McBirney, an expert of the National Department of Agriculture, is quoted as saying as to the soil condition of the Lower Pecos and Toyah Valley:

"My first impression was not very favorable of the soil in the immediate vicinity of Pecos City, where there is an excess of gypsum or carbonate of lime, but after careful investigation and having an analysis of soil made I have become a most enthusiastic advocate of this locality as to its productive power, especially for alfalfa, pears and European grape. It is of vital importance, however, to be assured that there is a sufficient fall to the land (not less than 5 feet to the mile, 12 or 15 would be better) for drainage. It is a well-known fact that where the land is flat or has not proper drainage, no matter how good the quality of the soil may be, after a few years of irrigation the natural salts of the soil will be brought to or near the surface by being dissolved, and through capillary attraction deposited through evaporation. There is plenty of good land in the Lower Pecos and Toyah valleys, where good drainage can be had, and that can be irrigated from ditch, artesian well or pumping plants."

Regarding the cost of wells, L. H. Coley, irrigation engineer of Pecos, says:

"The formation here is very irregular, and while some wells can be dug very cheap, the average cost of well and equipment would be about as follows: Wells will average about 250 feet, and cost of drilling will be about \$3 per foot. The 9%-inch casing will cost about \$1 per foot; strainer, average length 30 feet, \$4 per foot; pit, about \$2 per foot; pit casing, \$3 per foot. So we would have a sum: Well, \$750; 170-foot casing, \$170; 30-foot strainer, \$130; pit, 50 foot, \$100; pit casing, 50 foot, \$150; pump complete, \$400; a total of \$1700. The cost of power to operate such a plant, including engine,

freight, clutch pulley, drayage, foundation and erection will be about \$40 per horsepower. The size of engine will be determined by the lift in feet and the amount

of water to be pumped per minute."

Next to Pecos, Fort Stockton is the most important town in the Pecos Valley. The Kansas City, Mexico & Orient Railway has spent large sums of money developing lands for irrigation around this city, has erected a \$75,000 hotel, division offices and shops at this point, and will be running through trains into Fort Stockton by December 7 this year. The Imperial reservoir alone, erected by Orient interests, cost \$345,000, and will irrigate 22,000 acres of land. Fort Stockton is a hustling, growing town, with a big future ahead of it. It has two newspapers, 25 or 30 large stores, and thousands of homeseekers are settling around the city. Like Pecos, it should grow very rapidly and have 10,000 or 12,000 people in a few years.

Barstow, the county-seat of Ward county, is noted for the great Barstow Irrigation Co., a pioneer in Pecos Valley development. Barstow is only six and a half miles from Pecos, and is a pretty, substantial and prosperous town. It is on the Texas & Pacific Railway.

Toyah, 21 miles west of Pecos, is a division point on Texas & Pacific Railway and a town of 1500 inhabitants. It has shown a good growth in the past five years, and the oil development under way in the so-called Pecos-Toyah oil field has been of great benefit to the town. Large irrigation development is under way near this city.

Saragosa and Balmorhea, the baby twins of the Toyah Valley, are on the Pecos Valley Southern Railway, the first 31 miles and the second 38 miles from Pecos, the Pecos Valley Southern Railway connecting them with Pecos. Both towns are only about two years old, yet they are two of the most prosperous towns in all of the Southwest. Balmorhea has one of the largest alfalfa feed mills in the world, and is the metropolis of a growing country, irrigated from the waters of Toyah Creek. Saragosa, about the same size as Balmorhea, is the center of another large irrigated district, and a growing town. Banks and newspapers, real estate men and commercial clubs are found in both towns.

Grand Falls, in Ward county, is the headquarters of the Grand Falls Mutual Irrigation Co., a \$650,000 concern. It is noted for the magnificent alfalfa and grapes produced. Grand Falls is a town of importance with a good future ahead of it.

Other smaller but growing hamlets and towns in this section are Buena Vista, Arno, Porterville, Dixieland, Hermosa and others.

For several years reports have been floating around relative to the discovery of oil in the Toyah Valley, Reeves county, and along the eastern side of El Paso county. In drilling wells for water more or less oil was found at various depths, but until within a recent date no systematic work looking to the production of petroleum was undertaken. In 1903 J. D. Leatherman reported oil in a well about 15 miles of Toyah, and the same year the California Company drilled several shallow wells near Leatherman's well, but although oil

was found, the quantity was small and the wells were abandoned. Nothing further was done until last year, when the Texas Company obtained a number of leases and purchased several tracts of land in the valley and commenced drilling a prospect hole on section 16, block 59, public school land. With the drilling of this well excitement was aroused, and now efforts are being made to develop the oil supposed to underlie this region. At the present time the Texas Company has two wells finished and capped off, and is drilling day and night on a third well. The Corsicana Petroleum Co. and Toyah Oil & Pipe Line Co. are also putting down wells in this region.

DEVELOPING TEXAS MICA.

Large Deposits Controlled by a Pecos Company.

[Special Cor. Manufacturers Record.]

Pecos, Tex., July 13.

The Texas Mica Co. is developing on the south slope of Van Horn Mountain, in El Paso county, a mica property said to be of very great extent. This company also controls a patent on what it calls Micolithic finish, a process for surfacing concrete, brick and stone with a material made from mica. The property consists of 1280 acres, and experts report that the mica deposit is of very great and unusual extent. A suitable plant, including air compressor, air drills and all the necessary quarrying tools and equipment, is now on the property, and one mill to grind Micolithic finish to a capacity of three cars per week. The company reports that it will install a new mill in the near future with a daily capacity of 120 tons to meet the demand for Micolithic.

Referring to the Micolithic finish, the company says that this not only strengthens the material, but adds beauty as well as artistic appearance to all concrete work. It consists of a mixture that is composed of the same constituent elements as granite ground together and screened to a suitable size. This product is then treated by a simple process, and then mixed with cement and applied as a thin finish to the outer and inner surface of any reinforced concrete, stone or brick structure. It has been used for some time, and has been thoroughly tested and found to be a practical, architectural and attractive finish for concrete, stone and brick work. It has been used on some of the largest buildings in the Southwest, and pronounced by concrete experts, as well as architects, to be a solution of one of the great problems of concrete work. The advantages claimed for it by the company are:

1. It is absolutely fire and water proof.
2. It adds strength to the walls wherever applied.
3. It is highly artistic and decorative.
4. It is reasonably cheap.
5. Its colors are lasting and never require retouching.
6. It protects old stone, concrete and brick buildings, and makes them more attractive than when first built.
7. It makes a stone or concrete house look like a granite or marble palace.

It is said that architects are impressed with the value of this material for reinforced concrete construction because they can use as many colors, tints and blends as are known to be applied by the paint brush upon buildings as a decorative finish. The product is ground and sacked like Portland cement. The process of application consists of taking two parts of Micolithic finish and one part of Portland cement, with sufficient water to bring the mixture to the consistency of mortar, to be applied like common plaster. This is said to make a stronger bond than ordinary cement and to eliminate the cracks

which are so often seen in concrete work. The color effects of Micolithic finish are reported by the company as follows:

1. A beautiful light-gray granite.
2. A very handsome brownstone effect.
3. A very handsome dark granite.
4. A dark-red granite, always admired.
5. A buff and black-like Grecian onyx, an extremely handsome thing.
6. A plain buff granite.
7. A delicate pink granite.
8. A pure snow white.

"The above-named colors are only 8 out of 28 colors that the Texas Mica Co. produces at its mills and mines."

CHARLES E. TRIMBLE.

West Virginia's Coke Output.

In the quantity of coke produced West Virginia has for several years held second place among the States, but is outranked by Alabama in the value of the product, according to Edward W. Parker of the United States Geological Survey. The reason for this lies in the fact that the output of Alabama has in the iron-manufacturing center of Birmingham and vicinity a local consumptive market, whereas practically all of the West Virginia coke is shipped to furnaces outside of the State. In reaching for these markets not only does the coke of West Virginia have to meet in competition the product from other States, but each district in the State becomes a rival with the other West Virginia districts and the result is exhibited in the statistics of production and value. Alabama ranks third in output of coke, her production in 1910 being smaller than that of West Virginia by more than 550,000 tons, but the value of Alabama's product exceeded that of West Virginia by over \$1,800,000. The quantity of coke produced in West Virginia in 1910 was 3,803,881 short tons, valued at \$7,355,233. Alabama's production was 3,249,027 short tons, valued at \$9,165,821. In quality the West Virginia coke is generally regarded as better than that of Alabama, but the average price of Alabama coke in 1910 was \$2.82 a ton and that of West Virginia coke was \$1.93.

Next to Pennsylvania, West Virginia possesses larger supplies of coking and other high-grade coals than any other State in the Union, but so long as both the coal and the coke continue to be shipped out of the State, West Virginia will not attain the position she should occupy as a manufacturing State, nor will the miners of coal and makers of coke receive a just return for these products. At the present time, ranking second as a producer of coal and coke, West Virginia stands thirty-fourth in the value of her manufactured products. The principal beneficiaries of the coal-mining and coke-making industries in the State are the transportation companies.

In most of the coke-producing States the output in 1910 exceeded that of 1909. West Virginia was one of the exceptions, with a decrease of 140,067 short tons, or 3.55 per cent. The value decreased \$170,689, or 2.27 per cent. The number of establishments was reduced from 138 in 1909 to 135 in 1910, and the number of coke ovens from 20,283 to 19,912, and the number of idle ovens increased from 2274 to 2590. The abandoned plants and most of the idle ovens were in the Upper Monongahela district.

To Manufacture Fire-Bricks.

The Olive Hill (Ky.) Fire-Brick Co. has been chartered with \$400,000 capital stock to manufacture fire-bricks and similar products. W. G. MacCorkle, S. B. Chilton, W. A. MacCorkle, J. E. Chilton and S. Hess, all of Charleston, W. Va., were the incorporators.

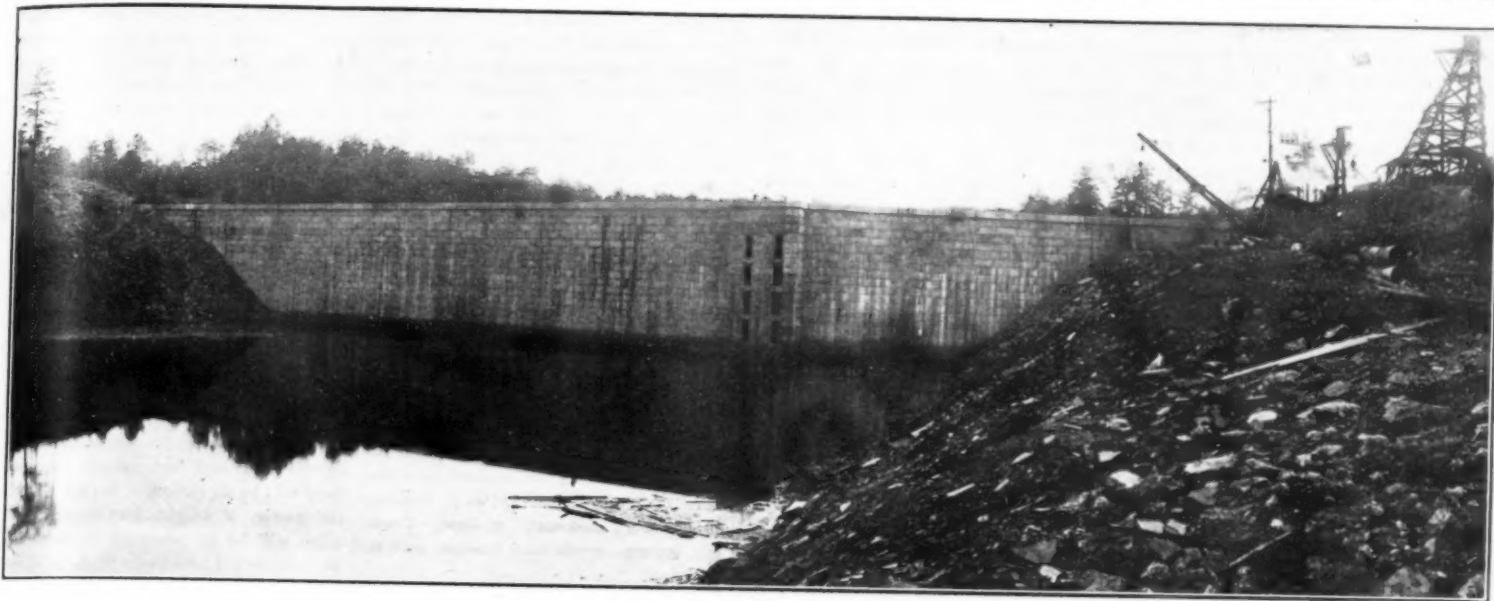
THE TENNESSEE COAL, IRON & RAILROAD CO.'S 2,500,000,000-GALLON WATER SUPPLY RESERVOIR.

In the MANUFACTURERS RECORD of September 23, 1909, was given a description of the proposed plan for securing an adequate supply of water for the plants of the Tennessee Coal, Iron & Railroad Co. to justify a great expansion of the operations

six miles below Ensley by direct line. The area of the water shed above the dam is 73 square miles. The reservoir at the elevation of the present proposed flow line will extend $5\frac{1}{8}$ miles along Village Creek, $1\frac{1}{2}$ miles along Camp Branch and $1\frac{1}{4}$

The dam, built of concrete, is 112 feet in height from the bottom of the cut-off wall, or 92 feet above the original rock. It is 520 feet long at the top and 270 feet at the base; the width is 18 feet under coping and $81\frac{1}{2}$ feet at base. The top is

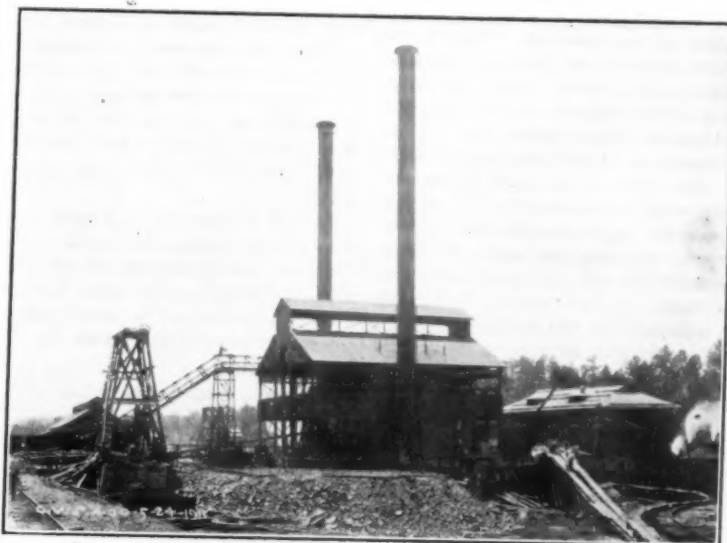
will increase the present capacity of 2,500,000,000 gallons to 4,800,000,000 gallons. The quantity of water below the intake is 600,000,000 gallons, which permits ample space for silting, and it is estimated that the amount of overflow during



VILLAGE CREEK DAM; UPSTREAM FACE.

of the United States Steel Corporation in the Birmingham district. When the Steel Corporation secured control of the Tennessee Company it soon ran up against a proposition which had staggered all who had previously controlled that property, in the fact that the water supply was not sufficient to justify great expansion. How to meet this difficulty was a problem to which the officers of the Tennessee Coal, Iron & Railroad Co. immediately gave attention. After more than a year of the most thorough expert investigation a plan was devised by which an ample supply of water for future needs could be provided. This involved the purchase of several thousand acres of land and the construction of a dam and the creation of a reservoir with a storage capacity of 2,500,000,000 gallons.

The accompanying illustrations show the Village Creek dam as completed, the pumping station with boiler-house, and a view of the spillway and the basin in the vicinity of the dam while the spillway



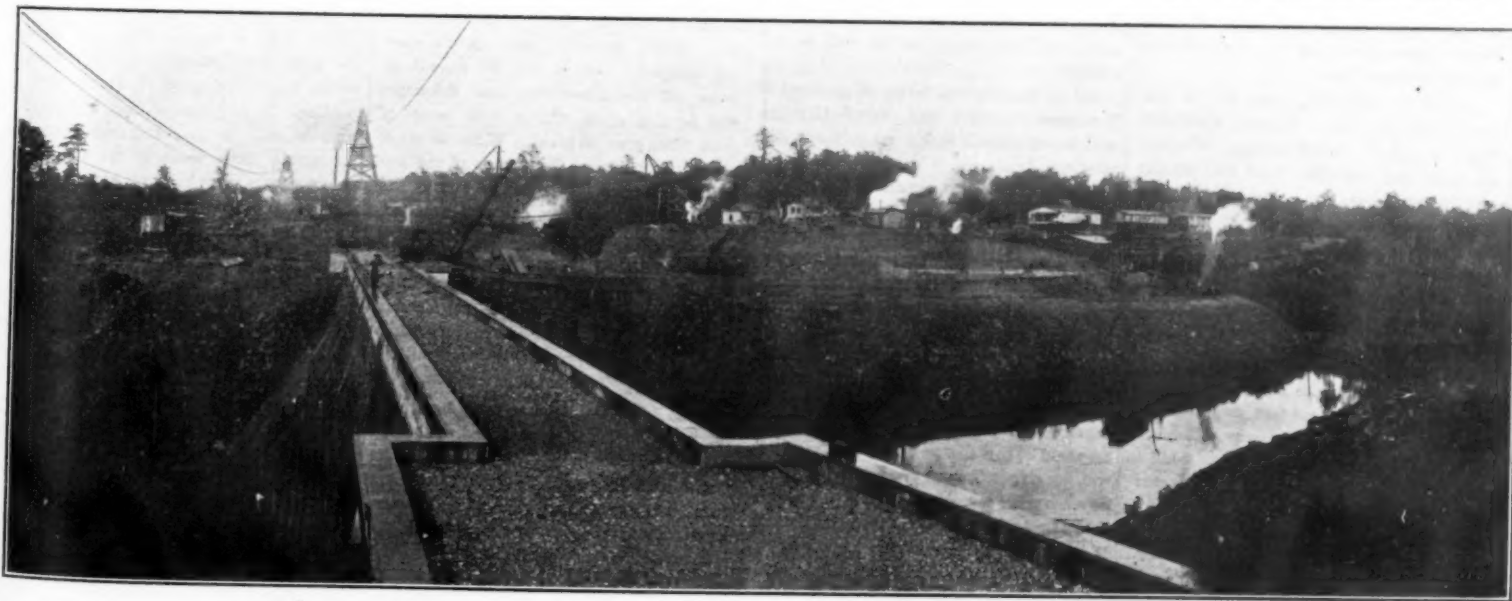
BOILER-HOUSE AND PUMPING STATION.

a normal year will practically equal the capacity of the reservoir, assuring that the lake will keep fresh.

At the flood flow the water will cover 400 acres or more, and at the present impounding flow line covers 320 acres.

The pumping station shown in the illustration is located on Camp Branch at a point 4.7 miles from Ensley by way of the piping system. The intake tunnel at the pumping station is $66\frac{1}{4}$ feet below the ground level. Water is delivered from the tunnel into a wet well, and from there through 44-inch suction pipe controlled by a sluice gate to the pumps in the pit, which is 55 feet deep. This pit is constructed of reinforced concrete and partially covered with a heavy concrete arch in which the pumping engines are installed, the engine floor being up to within 10 feet of the ground level.

The pumphouse consists of a steel-frame building with brick walls, and is 32 feet 4 inches wide and 94 feet long. Red rough-texture bricks are used outside and



VILLAGE CREEK DAM AND EXCAVATION FOR SPILLWAY.

was being excavated. The Village Creek dam is located twenty-two miles from the source of the stream which flows past Ensley, and it is a little over

miles along Corbet Branch. The average width of the flooded area, which is very irregular, will average 550 feet, though in many places it is much wider.

finished as a roadway, which connects the roadways of the two sides of the valley. It has been built with a possibility of further extension of 15 feet in height, which

light-colored bricks impervious to water are used inside. The window openings are large and are fitted with metal sash and frames. The building is covered with

slate roof, and has ridge ventilator and dormer windows. The present installation of pumps consists of two vertical cross-compound condensing Allis-Chalmers deep-pit type pumps of a capacity of 12,000,000 gallons per day each. The building is large enough to allow for an additional unit of the same capacity or for a turbine-driven pump of much larger capacity. The water head from pumping station to high-level reservoir is 225 feet at high water and 260 feet at low water.

The boiler plant to supply steam for these pumps, as well as for mining operations, consists of a battery of four Rust water-tube boilers of 500 horse-power each, made by the Babcock & Wilcox Company, Bayonne, N. J. They will carry steam pressure of 150 pounds and 75 degrees superheat.

A 10-ton electric crane has been provided for erecting and repair work.

The pipe line by which the water reaches the pumping station from the main reservoir tunnel and wet well is of the "lock-bar" type, made up in 30-foot sections. The longitudinal joint in each section consists of a rolled lock bar, which is closed over against the upset edge of the plate. The pipe is made in taper sections for

laying, the lock bars being chamfered to permit the sections to be joined. These field joints are then riveted and finally caulked from the outside.

The pipe line runs from the pumping station to a high-level reservoir, a distance of 9000 feet, from which distribution is made to Ensley, the by-product coke plant, with its capacity of 3000 tons per day, and to the plant of the American Steel & Wire Co. at Corey. One-half of this pipe, from the pumping station to the high-level reservoir, is made from three-eighths-inch plates, and the other half from five-sixteenths-inch plates. The pipe line from this high-level reservoir to Ensley consists of 900 feet of 48-inch cast-iron pipe and 6000 feet of 42-inch cast-iron pipe. At the end of the 48-inch line a 30-inch line of cast-iron pipe runs to the by-product coke plant and the American Steel & Wire plant. The capacity of this reservoir is 15,000,000 gallons.

The magnitude of this undertaking gives an indication of the comprehensive plans which the United States Steel Corporation must have in mind for the ultimate development of its Alabama properties.

Appalachian Exposition To Show South's Minerals.

[Special Correspondence Manufacturers Record.]

Knoxville, Tenn., July 14.

At the present writing, the indications bear that the Appalachian Exposition of 1911 at Knoxville, Tenn., will exceed in display and interest that of the first year, 1910. It will be held this year from September 12 to October 1. More space has been taken for the exposition this year at the present time than was used last year. In all lines greater interest is being manifested.

Greater efforts are being made this year for a display of the natural resources of the Appalachian region in minerals, both metallic and non-metallic, and forestry, including products of the sawmills. This exhibit will be along commercial lines, which means more what can be done with these minerals, both refractory and free milling, showing extent, availability, and if the property from which the samples are taken is for sale. In many instances some of the small amount of finished products will be shown, to display the ultimate result of manufacturing raw material into salable commodities.

One of the special features will be coal from East Tennessee, Eastern Kentucky, West Virginia, Southwestern Virginia, Alabama and Georgia. This coal display will include steam coal of various grades, coking coal, splint coal, gas coal, cannel coal, block coal, semi-anthracite coal and other varieties. Specialization in coal will be a feature as showing desirability as to free-burning qualities, consumption of carbon, elimination of waste by smoke, consumption of gases, availability for higher-class blacksmith use, specialties for fireplace use, with comfort and pleasure. The steam coal will show largely the heat units and evaporation power, as well as costs, f. o. b. as designated at manufacturing centers. Some of the coal of the Appalachian region is carefully prepared, sacked and shipped in box cars to some of the larger cities, where it commands fancy prices. Coal is now being shipped from the Appalachian regions to New York, New England and France, while large tonnage is supplied to the United States Navy. Some of these coals have extraordinary efficiency tests made by the United States Government, which will be

shown at the exposition. Many of the larger operators of West Virginia, Kentucky and Southwest Virginia, along the lines of the Norfolk & Western, Louisville & Nashville, Chesapeake & Ohio, Virginia & Southwestern and Carolina, Clinchfield & Ohio railroads, are making extensive preparation for the coal display. In Tennessee the operators, who have a very superior coal, are also making elaborate preparations, and will show many facts in relation to coal that will be valuable to manufacturers and producers.

Every effort is being made for an elaborate and comprehensive display of coke and interesting facts relating thereto.

In iron ore there will be displayed a large amount of the varied red and brown hematite, the limonites, magnetic, shot or buckwheat, the fossiliferous ores. In Tennessee there is large deposits of salt fossiliferous, hematite, containing a layer of a fossiliferous deposit of sea shells, which is being extensively mined with steam shovels. Large deposits of sienna and ochre are found, which will be exhibited.

All of the different forms of gold ore of Tennessee, Georgia and North Carolina will be exhibited, and a magnificent display will be shown.

The Tennessee Copper Co. and the Ducktown Sulphur, Iron & Copper Co. of the Ducktown Basin (Tennessee) are to make the most elaborate exhibit that has ever been shown of the copper and allied ores ever made from the Eastern United States. There will be displayed native copper, pyrites copper, carbonates, chalcoprites, calcoite with gossen, iron pyrites, and malachite, matte, copper and copper ingots. The acid produced by the Tennessee Copper Co. will be displayed, as well as slag. Copper granulated slag will be shown as a road binder. By an accident it was discovered that an application of salt would cement copper slag. A large amount of slag was sent to the office of public roads, Department of Agriculture, at Washington, and after many tests they have about succeeded in making it a perfect binder for highways. The Tennessee Copper Co. will have a large working model of its Burra Burra copper mines.

Zinc ores, of which there are concentrates, spelter and carbonates, will be displayed. Considerable of this ore is now mined, though the carbonates are more refractory than those found in the Joplin district, and it is believed that eventually a process will be found that will eliminate the present difficulties of smelting. These carbonates contain a very large percentage of zinc of a higher grade than usually handled by the present operations.

Clays cover a wide range, including kaolin, ball clay; shale, white and blue; brick clay, brick shale and fire clays. Extensive deposits of keil have recently been discovered and will be displayed. Hydraulic and Portland cement rock, of which there are enormous deposits, will be shown, as well as the manufactured articles.

In non-metallic minerals, barytes, both massive and crystallized, siliceous tripoli, as well as rotten stone, will be displayed. The best deposit of lithograph stone in the United States, and which is now mined and successfully competes with the imported stone from Germany, will also be shown. Marble dust and marble flour, of which there is great demand as a fertilizer, will also be shown, as it contains 99 per cent. carbonate of lime. Crude salt, gypsum, crude and finished, will be exhibited.

Great deposits of splendidly-figured onyx are found near Knoxville, one body being exceedingly hard, which is large in area and can be taken out in large blocks by channeling machines. It is susceptible of an extremely fine polish, and is said by users of this material to be of exceedingly fine quality. Talc and soapstones, saltpeter, alum, arsenic and copras from East Tennessee will be displayed.

There is a deposit of glass sand, about 40 feet thick, covering 10 counties of East Tennessee, which analyzes 98 per cent. silica and which can be mined with extreme ease, which will be shown. Other enormous deposits of glass sands will also be exhibited.

Manganese from many sections of the Appalachian region will be displayed. In fluxes many varieties of limestone, marble, fluorspar, calcite and silica are to be shown.

In building stones there will be shown fine samples of all of the well-known Tennessee marbles; sandstones, including red, brown, blue, gray, dove and different shades of yellow. One of these displays will contain beautiful carvings to show the exquisite use it can be placed to. Some of the limestones and dolomites will be displayed, with a wide range of color from gray to black. With the sandstones, marbles and limestones of the Appalachian region, there can be formed the most exquisite coloring, blending in perfect harmony, for magnificent decorative exterior and interior architectural work, as well as susceptible of either dull finish or polished surface, and fine-line carving. Granites will also be shown, of which there is a great variety in texture and color equal to any in the country.

Some of the sandstones have been used for years for abrasive purposes, and there will be a display of grindstones, whetstones and oilstones. The oilstones come from an exquisitely fine-grained stone found among the sandstones, showing the wearing of ages of sand into a dust, and the grain of it can only be seen with a good microscope.

In slates for roofing, structural and other purposes there is purple, blue and black. The blue and purple have a splendid cleavage for roofing purposes that is extremely clean. The black slate is in

deposits of 50 or more feet in thickness, almost without flaw, and can be quarried by channeling machines. All of these will be exhibited.

In rare minerals there will be exhibited rutile, titanium, tungsten, cobalt, cobaltite, zirconium and molybdenum.

One of the features of the exhibition will be an exhibition of the rare gems found in the Appalachian region, of which there is a few diamonds and many garnets (for abrasive and precious-stone uses), rubies, sapphires, aqua-marine, emeralds and hiddenites, most precious of all gems.

Another special feature of the mineral exhibit will be bauxite and its production, aluminum. This metal will be produced in East Tennessee by the Aluminum Company of North America, which is beginning the erection of 100,000-horse-power hydro-electric power plants near Knoxville, and will manufacture the aluminum produced in a useful commodity.

As the rivers of the eastern part of Tennessee contain millions of mussels, of which many contain famous Tennessee pearls, and the shells are suitable for pearl-button and ornamental purposes, there will be an elaborate display of shells and pearls. A pearl-button punching machine will be in operation to show how the buttons are punched out of the shells. These shells sell from \$8 to \$28 a ton, and are shipped to the pearl-button factories in the North.

Another important feature is road material for constructing macadam roads, also binders, oils and dust preventatives. As the Appalachian regions have now in use approximately 7000 miles of macadam roads, and upwards of \$6,000,000 is being expended this year in construction, and the problems of successful road building and maintenance is a matter of extraordinary importance, this feature will be of great value.

Arrangements have been made for display and operation of a gasoline motor car for mine use and coal-mine cars, and will be operated on a track of about 1200 feet in length, with some grade, and will carry passengers to the mineral and forestry building. A producer-gas machine, using slack or waste coal in manufacturing gas for illumination, power, heating and cooking, will be in operation. The process for briquetting slack or waste coal, with a binder that eliminates the objectionable features heretofore found, will be at work. There will be a coal-washing device in operation. A machine for using marble dust or marble flour and casting the same into ornamental carved marble works will also display its adaptability in its line. It is probable that a reduction furnace will be in continuous operation during the three weeks of the exposition, treating refractory gold, copper, iron, lead, silver and other ores. This will be displayed by a Denver (Col.) manufacturer, and will be an interesting part of the exposition.

In the Appalachian region there is known to be about 30 different kinds of mineral waters, with over 1000 different springs, sufficient for noted summer and curative resorts. There will be an extensive display of these mineral waters, some of which are noted and have a large sale.

A display of timber and lumber will be extensive, embracing approximately 100 varieties, covering all branches of manufacturing for which it is used, including by-products, like tannic acid, wood pulp, veneering and many other important specialties.

The agricultural department will contain every known agricultural product grown in the Appalachian region.

In live-stock it will, from present indi-

exhibitions, be a display 100 per cent. greater than that of last year, which was noted for its high class, and it is thought that this year it will be stronger in its classification than last year.

The poultry, at present indications, will be an exhibit more than double the entries of last year. These entries are being made from all parts of the United States and cover a wider range than last year. Over

5000 entries are promised. The pet stock will be greater than former exhibits.

In the main building the display of manufactured goods will be very extensive and coming from many parts of the region. About all of the Knoxville manufacturers will have a display, and over 60 manufacturing concerns of Chattanooga have secured space for an exhibit, also many others. GEORGE H. FREEMAN.

Yadkin River Power Company Plant at Blewett Falls.

[Special Correspondence Manufacturers Record.]

Charlotte, N. C., July 13.

The pushing to completion of the Yadkin River Power Co.'s hydro-electric plant at Blewett Falls, only a few miles west of Rockingham, N. C., is uppermost in the minds of the people of this section, as they realize that with electric power available for manufacturing industry a new era is in sight for Rockingham and contiguous territory. Cheap power is one of the greatest inducements that a community can offer for the location of mills and factories.

Rockingham now has 10 cotton mills using either steam or water and steam for power, besides a number of smaller plants that are operated by individual power, but that town will not be the only one benefited, as the Yadkin River Power Co. will have transmission lines, conveying the current to cities and towns many miles away, giving them also cheap power and offering the smaller places an opportunity to better light their streets and homes, to install street-car systems and in other ways help to modernize them.

To the persons not familiar with construction work of this character, it seems almost impossible to grasp the magnitude of this undertaking, but after an inspection of the plans and seeing the care and arrangement of detail, it becomes apparent that provision has been made to cover each portion of the work in its logical order.

Approaching the river from the Rockingham side, the first thing that comes into view is the dam, built of massive concrete masonry, stretching far out into the river, which eventually it will check and hold in control. At the present time dam is about 75 per cent. completed, although the worst part is done, so that it may be finished any time desired. This dam is to have a maximum height of 50 feet, with a bottom width of 57 feet and 9 feet on top. The length of the lowest spillway between abutments is 1219 feet, with stepped crests at each end, increasing the discharge at full stages and giving the dam a total length between abutments of about 1470 feet, and will back water a distance of eight miles, making a natural reservoir of eight miles, with a total area of 2500 acres. It will also make it possible to navigate the river with a motor boat for a distance of about 30 miles.

In addition to its storage capacity, the never-failing flow of the river may be taken in account, as the upper part of the Yadkin Valley is very well wooded, and the mountains are not bare of soil, the streams are more constant in flow than might be expected, so it can be seen at once that there is no reason to apprehend at any time a lack of water. An interesting feature at the dam is the fishway, which is carried by the retaining wall. This fishway, it is understood, is one of the few built of concrete in the South.

On account of the natural formation of the ground, the water from the dam is to be diverted and carried around through a natural ravine to the power-house, which

is located a distance of 1000 feet or more from the dam. At the entrance to this ravine or forebay an easily-cleaned floating drift rack is to be arranged to keep out the larger parts of the river drift. This drift rack, however, is merely an auxiliary rack to keep out the heavier drift, there being another rack at the entrance to the flumes. The power-house is so close to the dam and the forebay is of such ample dimensions that no drop in head has been considered between the dam and wheels.

A considerable amount of excavation is to be done for the tailrace between the power-house and river. The larger portion of this material, a very fine clay, was handled by a hydraulic dredge, which pumped it to the river bank some distance below, but there were encountered in the bottom of the tailrace gravel and small boulders which the dredge was unable to handle. This material is being moved by steam shovel direct into two-yard cars, which are hauled by dinkies to the dump.

The power-house will be 285 feet long by 70 feet wide, three stories in height, of brick, and will have a handsome appearance.

The hydraulic machinery is to be of the latest and most modern character.

There are six flumes 17 feet in diameter, with the extra flume 18 feet; also two exciter flumes 5 feet in diameter. All of these flumes are built into a concrete wall 80 feet high by 300 feet long, with a top width of 10 feet. The wheel pits are divided into seven spaces, six of which are 30 feet in width and one 27. The walls dividing these pits support ribbed arches, which, in turn, support barrel arches, and this forms the floor of the power-house. Entering the flumes, the water discharges through large tubes, the wheels being 22½ feet above tail water, but by means of the draft tube, in which a vacuum is formed, the full distance between tail water and head water is realized as head. This is a distinct advantage, as the full water value is made use of. The draft tubes discharge into wheel pits, floored with concrete two feet in thickness and extending the entire breadth and length of power-house.

Directly over the wheels a crane is to be operated for handling wheel equipment or repairs; also a crane will be installed over the generators. The electrical machinery is under contract with the General Electric Co., Schenectady, N. Y.

The energy is to be transmitted over about 150 miles on double and single circuit steel tower transmission lines, with probably 75 miles of subsidiary current lines, making distributing system about 225 miles in length. Work of erecting the towers between Blewett Falls and Raleigh has begun at the Falls.

Other lines have been projected in a southeasterly direction to Laurinburg, Pembroke and Lumberton, also to McCall, Bennettsville, Dillon and Hamar and west to Wadesboro. The transmission line between Blewett Falls and Raleigh is to be of double circuit steel tower, 45-foot wire,

1-0 seven-stranded copper cable on suspension insulators. The line will be protected by three-eighths-inch Siemens-Martin overhead steel cable. This line is to be 88 miles long. If the proposed transmission line is built between Blewett Falls and Rockingham, it is to be constructed of the same type and built of double circuit steel tower, excepting that the size of conductor will be different, probably No. 1 three-stranded copper cable, one side supplying the projected system beyond Hamlet at 100,000 volts and the other side supplying the proposed local distribution from Rockingham to Hamlet.

The whole line will be patrolled by men, keeping in touch with the main station by means of telephones placed at convenient distances, so that trouble can be reported promptly.

There will be one or more 100-kilowatt substations on this system. The principal substation and switching station are to be at Raleigh.

All of the transmission towers used will be of galvanized steel 62½ feet high, 16 feet square at the base, and anchored 7 feet in the ground. There will be an average of nine of these to the mile. Something like 1500 of these will be required. It is estimated that 20,000 poles will be needed for the subsidiary lines.

It is the purpose of the Yadkin River Power Co. to push the work to a rapid conclusion. With this idea in mind an electric-light plant has been installed to light the works at night, so that a night force of men may be put on in addition to the regular day force. They have also built a standard-gauge railroad from Pee Dee to the falls, a distance of about eight miles, to facilitate the getting of materials and machinery to the seat of operations. The railroad is so arranged that it comes directly along the south side of the power-house, and all of the machinery used here can be handled directly from the cars by use of cranes. Owning its own locomotive, the moving by the company of freight cars between the station and the plant is easily accomplished. They are in the market for two more locomotives and 40 flat cars.

The present plans call for the employment of 800 men at Blewett Falls and about 500 men on the transmission lines, as it is proposed to have a force of men at work both at the power plant and on the transmission lines at the same time, in this way bringing the entire proposition to a speedy completion.

All the necessary equipment, such as hoisting outfits, cableways, etc., incidental to construction work of this kind are to be found here in active operation. About 150,000 barrels of cement will be required to complete the work, there being about 130,000 cubic yards of concrete in the dam and power-house. The superstructure of the power-house will be brick, and about 3,000,000 brick will be required in its construction.

Messrs. Lockwood, Greene & Co., Boston, Mass., are the hydraulic engineers, with Mr. Wm. S. Ide as resident engineer. The officers of the Yadkin River Power Co., which has a capital stock of \$4,000,000, are Col. Chas. E. Johnson, president, of Raleigh, N. C.; Mr. H. H. Carr, vice-president and general manager, Raleigh, N. C.; Mr. F. W. Abbot, vice-president and construction manager, Pee Dee, N. C.; Mr. W. A. Leland, chief engineer, Rockingham, N. C. Mr. E. C. Potter of the Colonial Security Co. of Boston is treasurer, and Mr. E. P. Summerson of 71 Broadway, New York, is secretary.

J. LOUIS SPENCER.

Power from the Susquehanna River is now used by the Baltimore electric street railway system.

A \$6,000,000 DEVELOPMENT.

The 1200-Foot Dam of the Chattanooga & Tennessee River Power Co. Nearing Completion.

The great dam and locks at Hale's Bar, on the Tennessee River, 13 miles west of Chattanooga, designed to develop 56,000 horse-power, is nearing completion, after over five years of unusually difficult work. The dam is 1200 feet long, 65 feet high and 65 feet wide at the base. This hydro-electric development will represent an expenditure of \$6,000,000 when completed. The dam is being built of cyclopean concrete, and contains 200,000 cubic yards of concrete, 13,000 cubic yards of earth fill, and the excavations involved 110,000 cubic yards of rock and 300,000 cubic yards of earth. About 2000 men are employed on the work.

This dam will provide electric power for Chattanooga, Huntsville, Stevenson and other cities. The dam will also improve navigation for about 35 miles up the river, and the necessary lock facilities for boats passing the dam have been provided.

The power and transformer houses are built of steel and reinforced concrete, the power-house being 98x240 feet, four stories above the ground, with its substructure extending 75 feet below the surface in solid rock excavation. Each unit in the power-house consists of three turbine wheels on a vertical shaft so arranged as to give sufficient power at all stages of the water. The shafts are each 94 feet in height, and carry at the upper ends the rotors of the electric generators, supplying alternating three-phase current. These shafts, with the turbine wheels and generators, are supported entirely by oil-thrust bearings.

The lock for boats passing the dam is 60x312 feet, and was quarried out of the solid rock. It provides a lift of from 40 to 50 feet, depending on the stage of the river. Each leaf of the lower lock gate is 34 feet wide and 50 feet high, and weighs 130 tons. The upper gate is 27 feet high.

The stone used in the concrete work was secured from a quarry about 500 feet upstream from the dam, and that from the various excavations was also utilized. The large amount of equipment, cement and other materials that were used necessitated a branch line of railway from the dam site to connect with the Nashville, Chattanooga & St. Louis Railway at Ladds, about three miles distant. Materials needed on the opposite side of the river were transferred on barges from a dock on this branch line.

Owing to the isolated situation of the dam site, it has been necessary to build a fully-equipped town, with houses, hospital, church, schoolhouse, hotel, recreation and athletic club, moving-picture theater, etc.

The fact that this work is done on a navigable stream required the approval of the United States Government through the Corps of Engineers, United States Army. Major W. W. Harts, U. S. A., and Assistant Engineer George Tisdale represent the Government in the supervision of the work. The contractors are Jacobs & Davis, consulting and constructing engineers, 30 Church St., New York. This company was contractor for the construction of the McAdoo tubes under the Hudson River.

Messrs. Bradley and Anthony of New York, the financial backers of this development by the Chattanooga & Tennessee River Power Co., express themselves as being pleased with the present progress of the work. The chief engineer of the work, representing the power company, is John Bogart of New York, who is well known for the many large undertakings that he has carried through in the South.

WHAT IS YOUR TOWN DOING?

The MANUFACTURERS RECORD will be glad to receive from responsible correspondents in every town in the South brief items of news about business conditions and the opportunities for industrial enterprises. This information is desired for publication without cost of any kind to the sender, and regardless of whether the writer of the letter is a subscriber or not. The MANUFACTURERS RECORD accepts no paid matter in its reading pages. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South.

This department is open only to news facts of interest to investors, homeseekers and manufacturers. Communications of 200 or 300 words are likely to be given prompt publicity than more extended ones.

SETTLERS IN ARKANSAS.

Board of Trade,
Little Rock, Ark., July 12.

Editor Manufacturers Record:

The Board of Trade has issued a bulletin showing the growth of that part of the State on the Rock Island lines, based on the reports of real estate agents to Isaac Kline of the Rock Island Railway immigration department. During the six months ended June 30, 29 towns outside of Little Rock were visited by 981 prospectors, who bought 556 farms. Of this number, 473 were from other States. The number of visitors to the Little Rock real estate offices from other States during the same period aggregated 7300. Of this number, 931 bought farms, and 745 of the purchasers were from other States. During the same time the homestead inquiries received outside of Little Rock were 8000, and the claims filed were 802, and final proofs 630. In the Little Rock district, including 15 counties, there were 7575 inquiries, 369 claims and 201 proofs. During the past six months there has been an immigration along the lines of this one railroad of 2658 farmers. Allowing four members to each family, Arkansas has gained in this territory alone by immigration 10,632 people.

GEO. R. BROWN, Secretary.

WANTS AUTOBUSES.

Chamber of Commerce,
Sumter, S. C., July 12.

Editor Manufacturers Record:

We desire to correspond with any firm manufacturing autobuses or street-car autos of large carrying capacity with the view to the establishment of such a line in this city. We should also be glad to correspond with the right man with capital who may be interested in the hotel business. We need a thoroughly modern hotel costing at least \$100,000, and should the right party take up this proposition the business men of the city will subscribe to from \$40,000 to \$50,000 of the stock of same. Sumter has recently secured the Seaboard Air Line to connect with the main line to the north and two local lines, the Alcolu and the Betts timber line. With these three additional lines we shall have 11 lines of railroad, owned by six different companies, the three named above and the Southern with one line, the Atlantic Coast Line with five and the North-western of South Carolina with two lines.

A. V. SNELL, Secretary.

TO UNITE ORGANIZATIONS.

Board of Trade,
Pine Bluff, Ark., July 12.

Editor Manufacturers Record:

At a rousing smoker and mass-meeting the Board of Trade has launched a movement for uniting all of the Pine Bluff commercial or other trade organizations into one great body, which will have one object, and that, to make Pine Bluff a better place in which to live and a better place to do business. The union, now well under way, will greatly facilitate the progress of a city and community naturally endowed with untold wealth of resources lacking only a combined effort on the part of our people to do big things. Pine Bluff is a flourishing city, fast growing toward the 20,000 mark, with practically one great

industry, which is cotton, but there are unequaled opportunities for a hundred more industries. The awakening has arrived, and we will make some nice concessions to new industries during the coming year, which, from the enthusiasm and optimism already abroad, we feel safe in predicting will be a wonder-worker.

W. E. E. KOEPLER, Secretary.

OKLAHOMA CITY BUILDING.

Home Products' Association,
Oklahoma City, Okla., July 10.

Editor Manufacturers Record:

Although figures are usually considered dull, I believe that the following statistics will be of interest because they tell, better than words, a lively story of a city's growth. From January 1 to June 30, 1911, the total building permits aggregated \$1,906,100, of which public buildings represented \$134,950, business buildings \$819,487 and residence buildings \$951,663.

The fact that permits for several public buildings, including splendid churches and schools, were issued in the latter part of 1910 brings the total in that class of building to a rather low figure. The same is true of a number of large business buildings. If these buildings—most of which are still under construction—were added to the past six months' total, they would bring the grand total up to approximately \$3,110,000.

As the greater part of the construction work on these larger public, commercial and industrial buildings has actually been done within the past six months, it is safe to say that fully \$5,000,000 has been expended in building operations during the first half of 1911. This would seem to be at least a fair record for a "dull year."

In this connection it should be mentioned that public improvements, such as asphalt paving, sidewalks, storm and sanitary sewers, water and gas mains, electric lines, have all kept pace with the growth of the city.

PAUL B. SMITH, Secretary.

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Classified Opportunities" on pages 82 and 83, and under "Cities, Towns and Railroads Inviting Factories" on pages 110, 111, 112, 113 and 114.

Big Glass Sand Industry.

A glass-sand industry of large magnitude is being developed at Berkeley Springs, W. Va., under the name of the Berkeley Glass Sand Co., which is owned by Henry P. Bridges and Nelson Perin, both of this city. Mr. Bridges is president and Mr. Perin secretary and manager. This company is now operating a glass-sand mill with an output of 120 tons per day. It proposes to build a new mill at once with a capacity of 200 tons of white glass sand per day. Experts who have examined the property are said to have reported that there is sufficient material to take out 500 tons per day for 200 to 300 years.

The Commercial Club of Hattiesburg, Miss., T. S. Jackson, president, and M. L. Bixler, secretary, is circulating a folder calling attention to the advantages and opportunities of South Mississippi.

GOOD ROADS

WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

Bonds Voted.

Branwell, W. Va.—City will issue \$50,000 of bonds to complete road and street macadamizing.

Danville, Va.—City voted \$30,000 bond issue to repave North Main street.

Norton, Va.—City will issue \$35,000 of bonds for street improvements.

Palatka, Fla.—City voted \$15,000 bond issue to pave streets with vitrified brick.

Rockville, Md.—Montgomery county voted \$12,000 of road bonds.

Spring Hill, N. C.—Spring Hill township voted bond issue for road construction.

Bonds to Be Voted.

Anniston, Ala.—Calhoun county will vote November 15 on \$300,000 bond issue for road improvements.

Bronson, Fla.—Levy county will vote in September on \$100,000 bond issue for road construction.

Darien, Ga.—McIntosh county will vote on \$20,000 bond issue for road construction.

Macon, Ga.—Bibb county will vote on \$300,000 bond issue for road and bridge construction.

Wichita Falls, Tex.—Wichita county will vote on \$200,000 bond issue for road construction.

Winston-Salem, N. C.—City votes August 8 on issuing \$75,000 of bonds for street and sidewalk paving.

Contracts Awarded.

Americus, Ga.—City awarded contract for street paving and sewer extensions to cost \$250,000.

Charlotte, N. C.—City awarded contract for bitulithic and asphalt paving, brick gutters, etc., costing \$150,000.

Crowley, La.—City awarded contract for constructing four-foot cement sidewalks on 260 blocks.

High Point, N. C.—City awarded contract for macadamizing and curbing estimated to cost \$40,000.

Muskogee, Okla.—City awarded contract at about \$30,000 for gilsonite paving.

Nashville, Tenn.—City awarded contracts for granitoid curbing and sidewalk.

Rome, Ga.—City awarded paving contracts as follows: At \$13,304 for vitrified brick paving, at \$55,317 for wood-block paving, at \$26,769 for asphalt macadam surface, etc.

Temple, Tex.—City awarded contract for paving with vitrified brick and Has-san compressed concrete; amount available \$20,000.

Contracts to Be Awarded.

Altus, Okla.—City receives bids until July 20 for improving Main street with bitulithic.

Baltimore, Md.—State Roads Commission plans improving York road from city limits to Towson at cost of \$6000; distance six miles.

Benwood, W. Va.—City receives bids until July 24 for paving 1st street.

Bluefield, W. Va.—City receives bids until July 28 for grading, curbing and macadamizing.

Brookhaven, Miss.—Lincoln County District No. 1 receives bids until August 7 for grading and graveling 28 miles of road.

Brooklyn, Md.—Anne Arundel county receives bids until August 1 for grading and surfacing with macadam.

Brownsville, Tex.—City receives bids until August 15 for constructing 27,500 square yards of street paving with brick, creosoted wood block or bitulithic.

Canadian, Tex.—City will construct cement sidewalks, gutters and curbs and grade streets; cost estimated at \$30,000.

Chattanooga, Tenn.—Road Commissioners received bids until July 19 for vitrified brick or bituminous macadam paving, curbing, etc.

Frostburg, Md.—City receives bids until July 31 for grading and paving 1150 feet of streets.

Hammond, La.—City receives bids until August 10 for constructing 6½ miles of concrete sidewalks.

New Orleans, La.—City receives bids until July 24 for granite block paving, sub-surface drains, curbs, sidewalk paving, etc.

Paris, Ky.—City will construct 30 concrete sidewalks.

Shreveport, La.—City receives bids until July 27 for constructing 20,000 yards of brick paving, 50,000 square yards of wood block, 53,000 square yards of sheet asphalt, 60,000 square yards of asphaltic concrete, 49,000 square yards of bitulithic and 10,000 square yards of concrete.

Stamford, Tex.—City will pave four additional blocks.

Wetumpka, Ala.—Elmore county receives bids until July 24 to construct 24 miles of sand-clay and gravel roads and 8 miles of sand-clay road.

Lowndes County Roads.

Charles Lyon Wood, civil engineer and surveyor, Columbus, Miss., writes to the MANUFACTURERS RECORD:

"The Lowndes County Good Roads Association has been recently organized here, with Mr. Carey Cocke, president, and Mr. R. C. Hearn, secretary. An active educational campaign is now on looking toward the issuance of \$250,000 of road bonds this fall. Trade bulletins and information on good roads will be welcomed by the association. Lowndes county has 460 miles of public roads, of which 181 miles are 'first-class'—that is, 20 feet and wider. The county has large quantities of road material, such as clay, gravel and sand and fossil shell limestone. At present we are 'keeping up' the roads by means of a three-mill levy, which yields about \$23,000 yearly."

Big Enterprise Reported for Texas.

Dispatches from El Paso state that the Madera Land & Lumber Co. will build in that city a \$500,000 sash, door, box and interior finish mill and a \$1,500,000 to \$2,000,000 plant for manufacturing wrapping paper from the waste of the mill. For some time it has been reported that the company was planning big mills of this character to manufacture the timber from the company's lands in Mexico. Dr. F. S. Pearson, 20 Exchange Place, New York, is president of the company, and his office wires the MANUFACTURERS RECORD (regarding the El Paso mills) as follows: "Unable to supply information prior to Dr. Pearson's return next week."

The construction of these mills would be a considerable addition to Dr. Pearson's interests in Texas. Recently his office sent the MANUFACTURERS RECORD details of his plans for the Medina Irrigation Co., which is capitalized at \$6,000,000 and will construct a plant to irrigate 60,000 acres of land in Medina county. In addition to this, Dr. Pearson is understood to be planning the construction of a system to irrigate 30,000 acres of land in Uvalde county.

RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

HAWLEY WITH STILWELL.

Shonts, President of the Alton Road, Also in "Orient" Directorate.

Edwin Hawley and Theodore P. Shonts have been elected directors of the Kansas City, Mexico & Orient Railway, of which Arthur E. Stilwell is president, and it is reported from New York that they have acquired an interest in the new road, which is building a 1600-mile line from Kansas City southwest to Topolobampo, on the western coast of Mexico.

Mr. Stilwell is quoted as saying that the entrance of Messrs. Hawley and Shonts into the board has no significance beyond that the lines with which they are identified and the Orient have common interests. Some time ago a traffic agreement was closed between the Orient and the Chicago & Alton, one of the Hawley roads. He would not credit the report that they had acquired an interest in his railway.

This is the first appearance, it is understood, of any of the New York financial group in the Stilwell road, and it means closer relations with the Hawley lines. About half of the new transcontinental line is finished, and when it is complete the Hamburg-American Steamship Co., according to announcement made a year or more ago, is to put on steamers from Topolobampo to ports in Asia.

FRISCO GETS A NEW LINE.

Will Also Build Extension from Brady to Mason, Tex.

The St. Louis & San Francisco Railroad Co., according to dispatches from Brownwood, Tex., has purchased the Brownwood North & South Railroad promoted by local parties, and which has built about 20 miles of grade from Brownwood north to May, and proposes to continue the line to Rising Star, 10 miles farther. The Frisco, it is said, will now complete the road. B. F. Yoakum, chairman, and B. L. Winchell, president, of the system, recently visited the section where the line is located.

It is furthermore announced that the Frisco will proceed to build an extension southwest from Brady, Tex., as far as Mason, 25 miles. Engineers are in the field going over an old survey, which may be in part adapted to the proposed route. The question of constructing an extension from Mason to Fredericksburg, about 40 miles, is being considered, but this appears to be somewhat dependent upon the contemplated construction of a line from Fredericksburg to Waring, on the San Antonio & Aransas Pass Railway.

New Equipment, Rails, Etc.

The Valdosta, Moultrie & Western Railroad, Frank Roberts, president, Valdosta, Ga., will purchase some new equipment.

The St. Louis National Stockyards Co., St. Louis, has ordered two (instead of one) 60-ton switching locomotives from the American Locomotive Co., New York.

The Chicago, Memphis & Gulf Railroad is reported getting prices on 100 box and flat cars.

The Norfolk & Western Railway, says a market report, has purchased fittings for 500 gondola cars of 50 tons capacity which it will build in its own shops.

The Texas Traction Co., Dallas, Tex., says a report, has ordered two closed cars from the Danville Car Co., Danville, Ill.

The Baltimore & Ohio, it is reported, has ordered 7000 tons of rails from the Cambria Steel Co., Cambria, Pa.

The Chesapeake & Ohio's rail order to the Illinois Steel Co., it is said, is for 8500 tons, and not merely 1000 tons.

The Manufacturers Railway Co. of St. Louis has authorized the purchase of 100 steel coal cars of 50 tons capacity and 50 steel furniture cars.

The Louisville & Nashville Railroad, says a report, has ordered 3800 tons of bridge steel from the American Bridge Co., New York.

The Chesapeake & Ohio is reported in the market for 1000 tons of bridge steel.

The Frisco system is reported to have ordered six 70-foot gasoline electric motor cars from the General Electric Co., Schenectady, N. Y.

The Southwestern Traction & Power Co., Hennen Building Annex, New Orleans, La., will purchase 1900 tons of 70-pound A. S. C. E. rails, three interurban passenger and baggage cars, power-station machinery, electric locomotive, etc.

Southern's New Yard at Macon.

President W. W. Finley of the Southern Railway Co., Washington, D. C., furnishes information concerning the proposed construction at Macon, Ga., thus:

As a result of the growth of Macon and the development of freight traffic at that point, the Southern Railway Co. and the Georgia Southern & Florida Railway Co. have adopted and will carry out in the immediate future a project for the enlargement and improvement of their freight-handling facilities there.

The Southern Railway has purchased a tract of land for a new freight yard south of its present yard. This tract is 600 feet wide, extending 7000 feet south of Turpin street and embracing about 100 acres. The new yard, for which plans are now in course of preparation, will be constructed along the most modern lines, and will have a capacity of 150 cars.

The Southern Railway and the Georgia Southern & Florida Railway will have joint freighthouse and team-track facilities at the present site of the Georgia Southern & Florida freight terminals. The improvement will include the construction of a modern outbound freighthouse, the enlargement of the present inbound freighthouse, the construction of a team-track yard with a capacity of 80 cars, an interchange platform and a cotton platform large enough to take care of the business of both companies. The new outbound freighthouse and the enlarged inbound freighthouse will be provided with every modern convenience for handling traffic.

With these improvements Macon will be provided with convenient and up-to-date freight facilities, with a capacity sufficiently in advance of present requirements as to provide an ample margin for growth.

Hutchinson Island Improvements.

W. L. Seddon, chief engineer of the Seaboard Air Line, Portsmouth, Va., sends further information concerning the extensive improvements at Hutchinson Island, Savannah, Ga., saying that they are now under construction. The present slip, No. 3, on the west side of the island, is to be extended 600 feet and dredged to a depth of 22 feet below mean low water. This work when completed will give a slip 200 feet wide and 1750 feet long. The contract for the dredging has been awarded to the Atlantic, Gulf & Pacific Company of New York, and will be completed by August 15, 1911.

The present fertilizer warehouse, with 20-foot wharf on the east side of slip No. 3, will be extended 490 feet. This extension will be of wood construction on pile foundation, and will carry a floor load of 1500 pounds per square foot. The warehouse will be covered with Carey's magnesite roofing, and will have several divisions separated by brick fire walls. When the extension is finished it will give the company a warehouse 114 feet wide by 1100 feet long, with a wharf 20 feet wide.

A new fertilizer shed is to be built on the west side of slip No. 3, and will be of construction similar to the warehouse. It will be 50 feet wide and 400 feet long, with a 20-foot wharf.

The contract for these buildings and wharves has been awarded to Burwell & Hillyer of Jacksonville, Fla., and will be completed by November 30. The total contract price of buildings, wharves and dredging was \$100,000.

That Deal for the Clinchfield.

A dispatch from Richmond, Va., quotes President G. W. Stevens of the Chesapeake & Ohio Railway as saying that negotiations are proceeding for the lease of the Clinchfield Railroad by the Chesapeake & Ohio and the Seaboard Air Line railways, but that the principal obstacle in the way of reaching an agreement is the cost of constructing the necessary connecting link between the Clinchfield and the Chesapeake & Ohio from Dante, Va., to Elkhorn City, Ky. The route is about 40 miles, through rough, mountainous country and the work will be very expensive.

The advantage of the Clinchfield to the Chesapeake & Ohio would be in giving it a route to the South Atlantic States, while to the Seaboard it would mean a northwest route, the Chesapeake & Ohio handling the business to and from the North and the Seaboard the business to and from the South.

Another report concerning the pending deal is that the Seaboard executive committee now has the matter under consideration, but that financial terms are holding back an agreement. The Clinchfield's securities will have to be taken care of, and the manner in which that shall be done must be agreed upon by all parties to the lease.

Illinois Central Betterments.

An officer of the Illinois Central Railroad Co., with reference to the recent report that it would spend a large sum for improvements, says that the more important pieces of work to be done south of the Ohio River are as follows: Extension of second track from Diversion to Curve, Tenn., 1.3 miles; completion of 36.04 miles of second track on main line between Ponchatoula and New Orleans, La.; installation of a block signal system on 12 miles of double track between Hanson City and New Orleans; installation of interlocking plant at Harahan, La.; reduction of grades on 3.6 miles of double track south of McComb, Miss.; and improvement of water station facilities at McComb, Brookhaven and Crystal Springs, Miss. Some passing tracks will also be extended. The work will be done under the supervision of the engineering department, A. S. Baldwin being chief engineer at Chicago.

Southwestern Traction Plan.

The Southwestern Traction & Power Co., which has offices in the Hennen Building Annex at New Orleans, will, according to a report from there, begin construction within a month of its proposed line from Spanish Lake to Jeanerette and New Iberia, La. Officials are reported saying that construction was assured when Jeanerette recently voted to aid the line, New Iberia having some time ago agreed to do so. It is further said that this road is expected to be part of a through interurban service from Spanish Lake to Morgan City, 66 miles. The company is capitalized at \$1,500,000. F. W. Crosby is president and Henry A. Montz

vice-president. It is expected to finish the first part of the road and operate it within a year. There will be a loop in New Iberia for local service.

Will Build Another Extension.

The North & South Carolina Railroad and the South Carolina Western Railway, which are practically one (a branch of the Seaboard Air Line) have completed an extension of 10 miles from Darlington to Florence, S. C., and the former is now about to begin construction of an extension from Mullins to Allison's Ferry, S. C., about 30 miles south. Contract has been let for the first five miles out of Mullins, which is to be graded within two months. The line, it is said, will be of great advantage to farmers. The extension into Florence is being ballasted, and will be opened for service August 1. W. R. Bonsal of Hamlet, N. C., is president of the roads.

New Line Issues Bonds.

The Valdosta, Moultrie & Western Railroad Co. has been authorized to issue \$630,000 of bonds, the proceeds of which, according to a report from Valdosta, Ga., where the headquarters of the company are situated, will be used to retire existing debt, to improve terminals at both Valdosta and Moultrie, and to provide new equipment. Passenger stations will be erected and new yards built at each place. The shops will be erected at Valdosta, but no announcement is made as to when this will be done. Frank Roberts is president.

Batesville Road for Timber.

The Batesville Southwestern Railroad Co., recently chartered in Mississippi, according to official information received, will build a logging line about 16 miles long, connecting at Batesville with the Illinois Central Railroad. It will be used only for lumbering, and will be of very light construction, having a grade line to conform closely to the natural surface of the ground. Contracts will not be let for the construction, but the work will be done by the concern owning the timber which the proposed line will develop.

An Industrial Railroad.

R. F. Bettis, civil engineer, Box 548, Tampa, Fla., writes that he has just completed survey for the Mango & Kennedy Hill Railroad in Hillsborough county, with Dr. J. E. Hitt, president and owner, Mr. Bettis engineer in charge and Joe Tawson superintendent of construction. The line will serve a large sawmill, a brick and tile kiln, a rock quarry and crusher, and will connect at Mango with the Atlantic Coast Line. Dr. Hitt's office will be in Tampa.

Contracts Let for Cut-Off.

E. F. Mitchell, chief engineer of the Missouri Pacific Railway, has awarded contract to the List & Gifford Construction Co. of Kansas City for the grading and pile bridging on the new line from Marianna, Ark., to Bridge Junction, near Memphis, Tenn., about 46 miles. The Kansas City Bridge Co. received the contract for the foundations of steel bridges on this line.

The Louisville (Ky.) Railway Co., says a report from that city sold to a local syndicate and several individuals all of the \$750,000 of 5 per cent. general mortgage bonds, which it recently offered, at 100. Banks and trust companies composed the syndicate. President T. J. Minary is quoted saying that over \$300,000 more could have been sold had they been offered.

The third annual cotton carnival will open at Galveston on July 29.

TEXTILES

Do Southern Yarn Men Want Foreign Trade?

Boghossian & Co., Paterson, N. J., in a recent letter to the MANUFACTURERS RECORD said:

"We have also another inquiry from Levant for Nos. 16, 18, 20, 22 and 24 yarns cotton on skeins. There is a very big demand for yarns, which is now supplied by English manufacturers. If we could find a manufacturer that could offer prices low enough to compete with England we could surely open a very profitable market, which so far has been ignored by American manufacturers."

This letter was referred to a leading commission house in New York handling yarns, and in reply we have the following letter:

"We think you very much for the information, but it is just impossible for us to get the yarn put up the way these people want it. Our spinners absolutely refuse to take on this export business when we can get it."

As this comes from one of the largest commission houses in New York handling yarns as a specialty, this criticism of cotton spinners for their refusal to put up goods in the way the foreign markets demand, and declining to give any attention to the export business, is a rather serious reflection upon the energy and enterprise of Southern yarn spinners. Is it justified? Similar reports have been made before, and it looks as though there must be some foundation for them.

Adding 6000 Spindles.

The Amazon Cotton Mills of Thomasville, N. C., will increase from 6000 to 12,000 spindles. This company was mentioned last week as having awarded contracts for buildings and machinery to double its plant. Its additional building will be one story high, of brick mill construction, 107x110 feet. T. C. Thompson & Bros. of Charlotte and Birmingham have this contract.

Knoxville Spinning Co.

The Knoxville (Tenn.) Spinning Co. has been organized by L. D. Tyson, president of the Knoxville Cotton Mill Co. This new company is installing spindles and accompanying equipment for manufacturing knitting yarns in a 60x450-foot building. All machinery has been purchased, and the plant will be ready for operation by October, employing 150 operatives.

The Brevard Mill.

The Transylvania Cotton Mill Co. of Brevard, N. C., has been sold to Cleveland & Williams of Greenville, S. C. This firm will reorganize the company and enlarge the mill, probably installing looms to weave the present output of yarns. The mill has 4000 ring spindles, 2000 twister spindles and accompanying equipment.

Wiscasset Mills' Addition.

The Wiscasset Mills of Albemarle, N. C., will erect a two-story brick mill construction addition to picker building. Contract has been awarded to T. C. Thompson & Bros. of Charlotte and Birmingham.

Textile Notes.

The Board of Trade, Frostburg, Md., is interested in a plan to establish a silk mill.

The Klots Throwing Co., Lonaconing, Md., has ordered nine additional machines and a cooling system.

The Rockwood (Tenn.) Mills will add

new knitting machines; also appropriated \$10,000 to build box factory.

George A. Zook of Hagerstown, Md., will build a mill for knitting underwear, and has begun the construction of a building for the plant.

W. M. Smith, David Cannon, John Odell and others of Concord, N. C., will organize company with \$200,000 capital stock to build a cotton mill.

The American Ramie Co. of New Hartford, Conn., refers inquiries to E. A. Brinkerhoff, Jr., Box 1057, New York, for information regarding the recent report that the company will establish a mill at Franklinton, Md.

MINING

Pioneer Coal Co.

[Special Cor. Manufacturers Record.]
Louisville, Ky., July 15.

Several men of Louisville, for many years identified with coal mining in the Eastern and Western Kentucky coal fields, recently formed the Pioneer Coal Co. The company has purchased about 5000 acres on the main fork of Straight Creek, in Bell county. The land carries the Straight Creek seam of bituminous coal in full 80 per cent. of the boundary, as well as other workable seams, both above and below the Straight Creek. The Pioneer people have also purchased the leasehold interests which the East Tennessee Coal Co. held on a portion of the property, and will take over the work that company has done toward opening a mine. The new company's coal will be marketed in conjunction with the output of the North Jellico Wilton mines and the Taylor Coal Co., in which the owners are interested. The Pioneer property lies on both sides of Kettle Island Creek, which empties into Straight Creek, about 10 miles northeast of Pineville, Ky. A year ago the Louisville & Nashville Railroad built a line up Straight Creek to the Kettle Island property. Immediate development of the mines has been commenced by the Pioneer company, which expects to be ready with coal for the market by October. The men interested are J. B. Speed, I. P. Barnard, W. S. Speed, C. S. Nield, M. M. Bardwell and F. M. Sackett, all of Louisville, and they will take active part in the development. The main office will be at Kettle Island, Ky., but no officers have been appointed and no one chosen as local representative.

F. M. SACKETT.

Mid-Continent Company.

The Mid-Continent Company of Oklahoma City has been chartered by J. W. G. Martin, M. J. Reybold, Z. M. Cunningham and others. It is capitalized at \$300,000, and will develop land in the Arbuckle Mountains. This company wires the MANUFACTURERS RECORD as follows: "Acreage, 10; daily output, 600 tons; plant, \$40,000; buy machinery August 15." Mr. Martin is the company's treasurer.

To Develop Texas Salt.

Dispatches state that J. P. Collier, president of the First National Bank of Adrian, Tex., is planning the organization of a company capitalized at \$150,000 to develop salt deposits in Oldham county, near Adrian. It is stated that one stratum of salt is fully 170 feet thick, and that all the deposits are of uniform good quality and density.

Clear Fork Company Chartered.

The Clear Fork Coal & Land Co. of Beckley, W. Va., has been chartered by W. H. File, I. E. Stansbury, M. R. Dougherty and others. Its capital stock is \$50,000.

FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent letters:

Paper-bag, Labelling and Weighing Machinery.

Duyvene De Wit & Co., Heerengracht 158, Amsterdam, Holland, write to the MANUFACTURERS RECORD:

"We are interested in the sale of any technical approved object on a commission basis. We make a specialty of automatic weighing and filling machines for stuffs or for liquids, paper-bag-making machines, labelling machines and others to help hand labor in large factories. The terms on such machines as sold in Holland by German and English makers are very different. To introduce a new machine the makers send same on trial, so that the buyer can return same if not suitable. Terms are in many cases one-third with order, one-third on receipt and one-third 30 days after receipt. Our own commission is generally 10 to 15 and 20 per cent. We already represent many important machine factories."

American Products for Roumania.

M. Kohan, Galatz, Moldavia, Roumania, writes to the MANUFACTURERS RECORD:

"There are many lines of American goods which could find ready market here, and I shall be pleased if I could succeed in finding the right groove for them. I used to sell wire rods for making nails, but I cannot get hold of manufacturers disposed to make offers c. i. f. our ports, although there are very good shipping facilities now from your side to our ports. There are also hundreds of articles suitable for our import, and although your manufacturers and growers are keen on trade, it takes time before they realize that financial facilities are helping business quite as well as suitable prices. I hope with your assistance to persuade either manufacturers, producer or exporters to try to convince themselves of the good results we may obtain."

Machinery Wanted for Germany.

Karl Weiss & Co., Leonberg, near Stuttgart, Germany, writes to the MANUFACTURERS RECORD:

"We want to reach firms which make tools, apparatus and machinery for glueing and veneering wood. We want appliances for fixing the wood after the joints have been glued, apparatus for applying the glue, jaws for maintaining contact between the veneered parts, vats for cooking and keeping glue at an even temperature, etc.; also various kinds of machines for making veneer, appliances for lining drawers (cabinet) with zinc; also firms which make traveling wagons for workshops and guides for same; also wagons and travelers for use without tracks or guides, on the ground or floor. We want door and window-making machines."

Cotton Goods for Cuba.

Eugenio B. Bacarisse, Prado 65 (Altos), Havana, Cuba, writes to the MANUFACTURERS RECORD:

"I was referred to you as in position to furnish names and addresses of manufacturers of blue denims, jeans, etc. I would thank you very much if you would kindly do so. I want to represent such concerns

on a strictly commission basis, selling to the responsible wholesale importing trade here on regular terms. At present I have a buyer for 10,000 to 15,000 pounds per month of waste material on the order of enclosed samples. If you know of any party who can furnish same, kindly let him have the samples and request to quote me at once lowest possible cost, insurance and freight price therefor, landed Havana, and to state what my commission will be."

For Manufacturers and Exporters.

Ernst Bunge, 124 Boulevard De Strasbourg, Havre, France, writes to the MANUFACTURERS RECORD:

"I have opened in my office a department for the import of all kinds of American articles, such as tools, machinery and house articles, especially those that are not known in France. I therefore would be much obliged if you would inform manufacturers of this, as I would be very pleased to receive continually circulars of all kinds of new articles. As my intention is to buy on cash terms as much as possible, by carload lots, I desire to deal direct with the manufacturers to get the best terms possible, but am willing also, if I can get suitable terms, to do business with the exporters of these articles."

Moving-Picture Films.

Emil Cohn, 30 Markgrafen Str., Berlin S. W., Germany, writes to the MANUFACTURERS RECORD:

"I should like to effect arrangements with some manufacturer of films for cinematograph and kindred purposes for sole agency in this country, and shall thank you very much if you would lend me your assistance. I am living in this country for nearly 10 years, am well acquainted, and refer by permission to the Hon. A. M. Thackara, consul-general here; also to Messrs. Al. A. Rosenbush & Co., 146 Lincoln street, Boston, and to Dun & Bradstreet. Can also furnish bond or security if desired."

Ice Machine, Gasoline Engine, Etc.

Pan-American Trading & Supply Co., 10 Cristo street, San Juan, Porto Rico, writes to the MANUFACTURERS RECORD:

"We are interested in agency for ice machine; also an A1 stationary gasoline engine that could be used in conjunction with ice machines. We should like to get this information immediately. Later we shall be interested in agency for cheap, neat pattern percales, gingham and other light dress goods for tropics. We are also interested in securing agency for portable track for light sugar-cane cars."

Packing and Sugar Machinery.

Pan-American Trading & Supply Co., 10 Cristo street, San Juan, P. R., writes to the MANUFACTURERS RECORD:

"We should like to make arrangements for exclusive agency for big sugar-mill machinery. We are also interested in securing agency for A-1 packing to be used in sugar factories. We would like to handle a first-class asbestos packing with wire insertion, also a good rubber packing, and any first-class new style packing there may be on the market."

Wants Brewery Equipment.

Lauro M. Guerra y Compania, Cadena No. 15, Apartado Postal 540, Mexico City, Mexico, writes to the MANUFACTURERS RECORD:

"We are desirous of purchasing a small up-to-date second-hand brewery installation. This brewery installation is to be complete as possible, and the machinery must be in good condition. We should like to deal direct with the owner."

Construction Department

TO OUR READERS!

In order to follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY

The MANUFACTURERS RECORD seeks to verify the items reported in its Construction Department by full investigation. It is often impossible to do this before the item must be printed or else lose its value as news, and in some items it is found advisable to make statements as "It is reported" or "rumored," and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

HOW TO ADDRESS

The name of one or more incorporators of a newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the item. Sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be enabled to deliver your mail promptly, although it is inevitable that some failure by the postal authorities to deliver mail to new concerns will occur.

WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter written specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to information published in this department, it will be of advantage to all concerned if the *Manufacturers Record* is mentioned.

The *Daily Bulletin of the Manufacturers Record* is published every business day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invaluable to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the enlargement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in the *Manufacturers Record* for three months or longer a subscription to the *Daily Bulletin* is included for the contract period.

BRIDGES, CULVERTS, VIADUCTS

Ark., Marianna.—St. Louis & San Francisco Railroad, F. G. Jonah, chief engineer, St. Louis, Mo., will not construct bridge across St. Francis River at Marianna in near future. (Recently reported.)

Fla., Jacksonville.—Duval County Commissioners rejected bids for erection of wooden bridge over Dead River, Fernandina Rd., and for erection of county's half of bridge proposed over Nassau River on Fernandina Rd.; lowest bids were \$3200 and \$3925, respectively. Gail L. Barnard, County Engineer, was instructed to modify plans and readvertise for bids to be opened July 28. (Call for bids lately noted.)

Ga., Baxley.—Altamaha Highway Bridge Co., C. W. Melton, secretary, Baxley, will be incorporated with \$30,000 capital stock to build recently-noted steel bridge across Altamaha River; engineer not yet employed; preliminary survey made; proposed length of steel construction, 500 feet; trestling and approaches about 2800 feet; estimated cost, \$28,000; may be ready within 30 days to receive bids for materials and construction.

Ga., Cedartown.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., will construct bridge across tracks at College St.

Ga., Macon.—Legislature authorized Bibb county to vote on \$300,000 bond issue for bridge and road construction; election in fall. Address County Commissioners.

Ga., Sparta.—Hancock county will construct

steel bridge 110 feet long, 16 feet wide in the clear, over Little Buffalo Creek; bids opened August 3; W. E. Wiley, clerk. (See "Machinery Wanted.")

Miss., Brookhaven.—District No. 1 of Lincoln county will construct bridges and culverts along 28 miles of road; bids received until August 7; H. Cassidy, chairman District Highway Commissioners. (See "Machinery Wanted.")

Miss., Grenada.—Grenada county will construct reinforced concrete bridges; bids received until Aug. 7; John S. King, Chancery Clerk; Albert T. Witbeck, County Engineer. (See "Machinery Wanted.")

Miss., Mayersville.—Issaquena county will repair and place new draws in all bridges now over Steel's Bayou; date of opening bids postponed from July 3 (as lately stated) to August 7; M. M. Spiars, County Clerk. (See "Machinery Wanted.")

N. C., Statesville.—Statesville-Buffalo Shoals Bridge Co. (recently noted incorporated with \$125,000 capital stock) will build bridge across Catawba River at Buffalo Shoals; D. M. Ausley and Isadore Wallace of Statesville, with Osborne Brown, Long Island, N. C., were appointed committee to receive bids; officers are C. V. Henkel, president; R. V. Brawley, vice-president; Osborne Brown, secretary-treasurer. (See "Machinery Wanted.")

Tenn., Reliance.—Polk County will construct bridge across Hiwassee River; steel superstructure, concrete piers and abutments and earthen embankments; roadway 18 feet wide; bids, plans and specifications received until August 5; J. M. McBrayer, chairman committee. (See "Machinery Wanted.")

Tenn., Lebanon.—Wilson county awarded contract to Nashville Bridge Co., Nashville, Tenn., to construct bridge over Spring Creek on Peyton Rd.; structure to be steel, 140 feet long and 13 feet wide.

Tenn., Memphis.—Missouri Pacific Railway Co., E. G. Mitchell, chief engineer, St. Louis, Mo., awarded contract to Kansas City Bridge Co., Kansas City, Mo., for foundations of steel bridges on line from Marianna to Bridge Junction, near Memphis.

Tenn., Memphis.—Shelby county will construct following bridges, etc.: Steel or concrete bridge, 40 feet long, over Applewhite Creek; steel or concrete bridge, 70 feet long, over Reed's Creek; widen levee across Nonconah Creek bottom; 100-foot steel or concrete bridge over Beaver Creek; 60-foot steel or concrete bridge over Crooked Creek; 24-foot concrete culvert over Crooked Creek; place concrete floor on Central Avenue steel bridge, and construct 30-foot reinforced concrete culvert at Strong's Creek; bids received until July 17; St. George Richardson, County Engineer.

Tenn., Memphis.—Shelby county will construct two concrete culverts on Woodstock and Cuba Rd., Fourth Civil District; bids received until July 17; St. George Richardson, County Engineer.

Tenn., Memphis.—Shelby County Commissioners have awarded contracts for construction of five bridges of reinforced concrete beam spans, as follows: To Memphis Bridge Co., Memphis, Tenn., 220 feet of 10-22-foot panels at \$4795; same company, 140 feet of 7-20-foot panels at \$3687; Vincennes Bridge Co., Vincennes, Ind., 220 feet of 10-22-foot panels at \$4750; Joliet Bridge & Iron Co., Joliet, Ill., 144 feet and 84 feet at \$4075 and \$2955; three bridges to be on 15-inch concrete piles 12 feet or deeper in ground; others on concrete pedestals; all bridges to have 16-foot roadway, with three lines two-inch pipe hand rails; work supervised by St. George Richardson, County Engineer, Room 8 Court-house, Memphis. (Bridges recently noted.)

Tenn., Somerville.—Fayette County Commissioners have \$13,000 appropriation for construction of bridges; plans not made; engineer not selected; H. P. Hobson, chairman. (Recently noted.)

Tex., Beaumont.—Jefferson County Commissioners contemplate arranging plan to construct bridge across Neches River; probably iron construction and draw type; cost estimated at \$65,000.

Tex., Houston.—Southern Traction Co., J. F. Strickland, president, will, it is reported, construct bridge costing about \$100,000 across Trinity River.

Va., Spottsylvania.—P. St. J. Wilson, State Highway Commissioner, Richmond, Va., receives bids until July 28 for construction of two steel bridges in Spottsylvania county;

plans and specifications on file at office of County Clerk; lately noted. (See "Machinery Wanted.")

W. Va., Bramwell.—City Council adopted ordinance to issue \$7000 bonds to construct bridges; J. A. Waddell, Mayor.

W. Va., Martinsburg.—Baltimore & Ohio Railroad, F. L. Stuart, chief engineer, Baltimore and Charles Sts., Baltimore, Md., contemplates, it is reported, various improvements, including construction of four-track viaduct over East Burke St. and raising of grade at Flags Crossing 15 feet and erection of four-track viaduct.

CANNING AND PACKING PLANTS

La., Hammond.—Daniel F. Sherman, New Orleans, La.; J. R. Abels, Ponchatoula, La., and others are interested in establishment of fruit-reducing plant.

La., Lake Charles.—Louisiana Orchard & Land Co., A. J. Perkins, president, will award contract to Delatte & Lagrange, Lake Charles, to remodel canning plant recently purchased; ordinary construction; cost of machinery \$2000; daily capacity 10,000 cans of fruit. (Recently noted.)

Okl., Enid.—Enid Holding & Industrial Co. is promoting establishment of packing plant.

Tex., Bryan.—Commercial Club is corresponding with parties relative to establishment of cannery. (See "Miscellaneous Factories.")

Tex., Weimar.—Business League is promoting establishment of desiccated egg, fruit and vegetable plant.

Va., Fredericksburg.—Alart & McGuire Company organized with \$450,000 capital stock; will continue pickle factory of Alart & McGuire; H. B. Lane, manager.

Va., Williamsburg.—West Point Oyster Co. incorporated with \$15,000 capital stock; E. W. Maynard, president; D. R. Norment, vice-president, both of Magruder, Va.; L. W. Lane, Sr., secretary and treasurer, Williamsburg.

W. Va., Parsons.—Parsons Canning & Manufacturing Co., recently reported incorporated with \$5000 capital stock, elected F. M. Glenn, president; W. B. Haller, vice-president; Burt Wilson, treasurer, and W. J. Corrick, secretary; will erect building 24x60 feet; concrete construction; cost \$5000; day labor.

CLAYWORKING PLANTS

Ark., Devall.—Bricks.—Establishment of brick plant using Sanderson process is reported for operation in September; S. B. Pfeiffer, manager.

Ky., Olive Hill.—Fire Bricks.—Olive Hill Fire Brick Co. chartered with \$400,000 capital stock by W. A. MacCorkle, S. B. Chilton, S. Hess and others of Charleston, W. Va.

Va., Norton.—Bricks.—Norton Brick & Manufacturing Co. incorporated with \$25,000 capital stock; E. G. Buck, president; C. J. Swank, vice-president; Janie Buck, secretary.

COAL MINES AND COKE OVENS

Ark., Fort Smith.—Bache-Denham Coal Co., F. Bache, president, increased capital stock from \$100,000 to \$155,000.

Ky., Harlan County.—Black Mountain Coal Co., Pineville, Ky., will develop 1700 acres land; daily capacity 800 tons coal; Samuel Bennett, president; W. M. Burchfield, vice-president; H. B. Jones, secretary-treasurer. (Mr. Bennett and Mr. Jones recently noted as to operate mine.)

Ky., Kettle Island.—Pioneer Coal Co. organized by F. M. Sackett, J. B. Speed, R. P. Barnard and others of Louisville, Ky.; purchased Edgemont Coal Co. property of 5000 acres and East Tennessee Coal Co. leases; will drive four entries and erect tipples; construction begun.

Tenn., Memphis.—Rhea-Stone Coal Co. incorporated with \$5000 capital stock by T. T. Rhea, J. A. Stone, W. C. Edwards, S. W. Portlock and others.

W. Va., Beckley.—Clear Fork Coal & Land Co. incorporated with \$50,000 capital stock by W. H. File, I. E. Stansbury, F. W. File, M. R. Dougherty and Ashton File.

CONCRETE AND CEMENT PLANTS

Ala., Birmingham.—American Concrete & Steel Tie Co., Brown Marx Bldg., will establish plant, and wires Manufacturers Rec-

ord as follows: "Plant cost \$50,000; already equipped; cement bricks, blocks and concrete construction materials; tie presses being installed; building, steel and creosoted wood 50 by 150 feet, part three stories."

Ga., Portland.—Piedmont Portland Cement Co. advises Manufacturers Record it is now installing additional machinery to increase daily output 250 barrels cement; installation to be completed in about five weeks; has voted to issue additional stock to increase daily capacity to 1500 barrels by January 1; selling office, Kendrick & Tucker, agents, Candler Bldg., Atlanta, Ga.

COTTON COMPRESSES AND GINS

Ala., Faunsdale.—Farmers' Gin & Warehouse Co. will erect cotton gin.

Ark., Prescott.—Nevada County Gin Co. incorporated with \$7500 capital stock by H. D. Holloway, W. C. Felts, L. N. Westmoreland, D. L. Dillard and others.

Ga., Buchanan.—L. C. Mandeville of Carrollton, Ga., will build ginnery; construction begun.

Okl., Gould.—Farmers' Gin Co. incorporated with \$7000 capital stock by C. T. Putnam, W. H. Rogers, J. D. Sanders and W. H. Frazier.

Okl., Talhina.—Talhina Gin Co. (successor to J. F. Graham) will install cotton gin.

S. C., Lake City.—Farmers' Union Ginning & Manufacturing Co. increased capital stock from \$2000 to \$10,000.

Tex., Belton.—Henry Wunderlich has purchased machinery for cotton gin; five stands of 70 saws; 100-horse-power steam plant; frame construction; walls and roof covered with galvanized corrugated iron; construction by owner. (Recently noted.)

Tex., Donna.—R. B. Ledbetter and J. L. Guernsey have contract to erect buildings for cotton compress and cottonseed-oil mill; cost about \$10,000.

Tex., Goodlett.—Goodlett Gin Co., O. F. Decker, manager, will rebuild plant recently reported burned; cost \$8000; machinery partially purchased. (See "Machinery Wanted.")

Tex., Ripley.—Farmers' Gin Co. organized; will erect cotton gin; four 70 saws; cost \$5000; construction begun.

COTTONSEED-OIL MILLS

N. C., Elizabeth City.—C. W. Stevens of N. W. Stevens Company is chairman of committee promoting organization of company with \$25,000 capital stock to establish cottonseed-oil mill; capacity, 4000 tons of cottonseed annually.

N. C., Oriental.—Pamlico Union Cotton Oil Mill & Warehouse Co. incorporated with \$50,000 capital stock by J. L. Dawson, O. C. Daniels and others.

Tex., Belton.—Mid Texas Oil Mills Incorporated with \$250,000 capital stock by N. K. Smith, M. V. Smith and A. W. Storms; branches at Granger and Bartlett, Tex.

Tex., Donna.—W. W. Autrey, Memphis, Tenn., contemplates building cottonseed-oil mill.

Tex., Donna.—R. B. Ledbetter and J. L. Guernsey have contract to erect buildings for cottonseed-oil mill and cotton compress; cost about \$10,000.

DRAINAGE AND IRRIGATION

Fla., Tallahassee.—State will construct drainage canals on east coast, near Pompano, Fulford and Larkin; total length, 16 miles; bottom width, 25 feet; mean depth, 6 feet; about 400,000 cu. yds. earth excavation and 200,000 cubic yards rock; Drainage Commissioners receive bids until August 10; J. O. Wright, chief drainage engineer, Tallahassee. (See "Machinery Wanted.")

Tex., Del Rio.—D. B. Chapin of Chapin, Tex., is reported as completing arrangements for irrigation enterprise previously mentioned; is said to have interested New York capitalists, obtained option on 90,000 acres land and negotiating for 30,000 acres; plans contemplate construction of dam across Devil's River, this work and accompanying improvements to involve cost of \$5,000,000; will plant cotton, etc., and probably build cotton mill. (Reported several months ago as planned.)

ELECTRIC LIGHT AND POWER

Ala., Birmingham.—Birmingham Railway, Light & Power Co. has permit to erect cooling tower costing \$25,000.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the *Manufacturers Record* is mentioned.

Ala., Headland.—City awarded contract to J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for improvements to electric-light plant and water-works. (See "Water-Works.")

Ark., El Dorado.—City Council granted franchise to El Dorado Light & Water Co. calling for erection of power-house, installation of two sets of machinery and extension of water mains.

Ark., Pine Bluff.—Pine Bluff Corporation will double capacity of electric-power plant.

Ga., Colquitt.—City awarded contract to J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for improvements to electric-light plant and water-works; cost \$15,000. (Plans previously noted prepared by J. B. McCrary Company.)

Ga., Darien.—City granted 30-year franchise for electric plant. Address The Mayor.

Ga., Washington.—City voted \$30,000 bond issue for reconstruction of electric-light plant and installation of filter; will erect building 60x70 feet, of mill construction; engineers, Westinghouse, Church, Kerr & Co., 10 Bridge St., New York; E. A. Barnett, Mayor. (Recently mentioned.)

Md., Frederick.—Western Maryland Power Co. (Frederick Railroad Co.) will build electric power plant at Bissell Station; consulting engineer, P. O. Keilholtz, Continental Bldg., Baltimore, Md.

Mo., King City.—City desires to grant franchise to erect electric-light plant and to contract for street lighting; also for ice plant in conjunction with light plant. J. W. Sulinger may be addressed.

Mo., Kirkwood.—City contemplates improving electric-light plant; \$10,000 bond issue proposed. Address The Mayor.

Mo., Monett.—City will install following machinery for proposed electric-light plant: 25-horse-power simple Corliss engine with direct connection to 150-kilowatt alternating-current generator; 90-horse-power simple side-crank engine for direct connection to 60-kilowatt alternating-current generator; 160-horse-power simple side-crank engine for direct connection to 100-kilowatt alternating-current generator; four-panel switchboard; three horizontal return-tubular boilers of 100 horse-power each with stack; 500-horse-power open heater; 400-horse-power boiler-feed pump complete; pole line equipment, including tungsten lamps, transformers, poles, wire, lightning arresters, etc.; bids for equipment opened July 18; Rollins & Westover, Beals Bldg., Kansas City, Mo., are engineers; Perry Short, Mayor. (Recently mentioned.)

N. C., Ashboro.—City awarded contract to J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for improvements to electric-light plant and water-works; cost \$10,000.

N. C., Lowell.—Spencer Mountain Mills placed contracts for steel truss and tile roof on damaged buildings; also let contracts for destroyed generator-room machinery. (Under "N. C., Gastonia," recently noted to be rebuilt.)

N. C., Raleigh.—State Hospital for Insane will install electric-light plant.

Okla., Custer.—City awarded contract to construct electric-light plant and water-works at \$40,000 and purchase of bonds to Kennedy & Fleming, State National Bank Bldg., Oklahoma City, Okla.; consulting engineer, Western Engineering Co. of Oklahoma City. (Recently mentioned.)

S. C., Charleston.—City contemplates construction of electric-light plant; engaged Lamar Lyndon, electrical engineer, of New York, to submit report on advisability of construction.

Tenn., South Pittsburg.—South Pittsburg Electric Light & Power Co. will rebuild electric-light plant burned at loss of about \$6000.

Tex., Cleburne.—Gulf, Colorado & Santa Fe Railway awarded contract to H. D. McCoy, Cleburne, to erect power-house costing about \$13,000. (Recently mentioned under "Railway Shops, Terminals, Railroads, etc.")

Tex., Floresville.—J. H. Bell, San Antonio, Tex., is considering establishment of electric-light plant.

Tex., Fort Worth.—Fort Worth Power & Light Co. chartered with \$3,500,000 capital stock to take over properties of J. R. Nutt of Cleveland, O., who will probably be elected president; incorporators, J. R. Nutt, George Holbrook and others of Cleveland, O.; Geo. T. Reynolds, T. B. Yarbrough and others of Fort Worth, and others. (Mr. Nutt's construction plans previously detailed; work now progressing.)

Tex., Houston.—Houston Lighting & Power Co. refers to Ford, Bacon & Davis, 921 Canal St., New Orleans, La., for information regarding power-station addition recently reported.

Tex., Menard.—E. C. Clark, Chicago, Ill., contemplates construction of electric-light plant.

Tex., Tenaha.—Tenaha Milling Plant & Tenaha Paint Manufacturing Co., P. C. Votaw, president and manager, contemplate installing electric-light plant.

Va., Bowling Green.—City plans to establish electric-light plant or to grant franchise. Address The Mayor.

Va., Danville.—City voted \$150,000 bond issue to improve electric-light plant. Address The Mayor. (Recently mentioned.)

Va., Harrisonburg.—City will improve and repair electric plant on Shenandoah River; work will consist of repairs to machinery, deepening and widening of tail race and general overhauling of entire plant; estimated cost over \$4000; N. Wilson Davis, superintendent of construction.

Va., Smithfield.—Smithfield Water Co., B. P. Gay, manager, has not completed plans for construction of electric-light plant recently noted contemplated; probably use suction gas producer and gas engine; population 1400. (See "Machinery Wanted.")

W. Va., Charles Town.—Citizens' Electric Co. (recently noted to have purchased Charles Town Light & Power Co.'s plant) will make changes in switchboard and reconstruction of lines; receives electricity from Winchester & Washington City Railway Co. (See "Machinery Wanted.")

FERTILIZER FACTORIES

Ala., Ashford.—Farmers' Union Warehouse Co., Horace Hicks, secretary, will erect fertilizer plant (recently noted), including 64x100-foot and 74x37-foot buildings; building proposals opened July 15; open bids September 1 for installing guano-mixing plant; daily capacity, 50 tons fertilizer. (See "Machinery Wanted.")

Ala., Jefferson.—Jefferson Fertilizer Co. will, it is reported, erect 100-foot addition to main building and increase manufacturing capacity one-fourth.

Fla., Jacksonville.—Osceola Fertilizer Co. wires Manufacturers Record regarding plant as follows: "Capacity, 30,000 tons annually; frame buildings; Hugger Bros. of Montgomery, Ala., contractors; building material purchased; machinery contracts all placed." (Lately reported organized.)

Fla., Jacksonville.—Osceola Fertilizer Co., W. H. Cody, president, awarded contract to Hugger Bros., Montgomery, Ala., to erect fertilizer plant; capacity 50,000 tons fertilizer annually. (Recently mentioned.)

Fla., South Jacksonville.—E. O. Painter Fertilizer Co., Jacksonville, Fla., will erect addition to South Jacksonville plant; 250x160-foot building; mill or concrete construction; plans by J. H. W. Hawkins, Jacksonville, to whom building proposals should be addressed; install fertilizer-mixing machinery; date of opening machinery bids not fixed. (See "Machinery Wanted.")

Ga., Jesup.—Union Phosphate Co., Union City, Ga., contemplates establishment of plant at Jesup or Waycross, Ga.

La., Harvey.—Swift & Co., Chicago, Ill., reported to let contract to George J. Glover, New Orleans, La., for erection of fertilizer plant in connection with cottonseed-oil mill recently mentioned; portion of building to be three stories, of concrete construction, for refrigerating plant; other portion, one story, 40 feet high, wooden construction, for storage; cost, exclusive of machinery, about \$70,000.

Ga., Hawkinsville.—Ocmulgee Guano Co. awarded contract to W. W. Simmons, McRae, Ga., to erect fertilizer factory; 143x192 feet; cost about \$14,000; R. F. De Lamar, president; A. W. Waller, secretary-treasurer. (Recently reported incorporated with \$25,000 capital stock.)

La., St. Bernard.—St. Bernard Refining & Fertilizer Co., Andrew Fitzpatrick, president, awarded contract to Richard McCarthy, New Orleans, La., to construct fertilizer plant; fireproof construction. (Recently mentioned.)

Md., Baltimore.—Home Fertilizer & Chemical Co., Lilburn T. Goldsborough, secretary, 310 Maryland Trust Bldg., increased capital stock from \$40,000 to \$100,000.

Va., Roanoke.—A. D. Adair & McCarty Bros., 200 Walton Bldg., Atlanta, Ga. (recently noted to establish fertilizer factory at Roanoke), state site has been purchased, but plans are not ready for announcement.

FLOUR, FEED AND MEAL MILLS

Ala., Bay Minette.—Farmers' Gln Co. will install grist mill.

Ark., Little Rock.—Munn Corn Products

Co. incorporated with \$50,000 capital stock; Cecil E. Munn, president; Frank A. Howard, vice-president; Clarence J. Howard, secretary-treasurer.

Tex., Ennis.—R. L. Sparkman has purchased 24x30-foot concrete and ironclad building and will install corn-mill machinery; Mr. Sparkman is engineer and architect; machinery ordered; daily capacity, 50 barrels corn meal. (Recently noted to erect mill.)

Va., Draper.—Rex Milling Co. contemplates installation of machinery to operate mill by electric power.

FOUNDRY AND MACHINE PLANTS

Ala., Birmingham.—Pipe Works.—Beggs Pipe & Foundry Co. incorporated with \$50,000 capital stock to manufacture cast-iron pipe and other foundry products; H. T. Beggs, president; R. C. White, vice-president; G. W. Beggs, treasurer; J. P. Beggs, secretary.

Ala., Birmingham.—Pipe Works.—United States Cast Iron Pipe & Foundry Co., 71 Broadway, New York, is about to close negotiations for Dimmick Pipe Co.'s plant at from \$400,000 to \$500,000; plans to resume plant's operation. J. C. Mahen wires Manufacturers Record as follows: "Have succeeded in negotiating sale to United States company and details of transfer are being arranged."

Ala., Birmingham.—Grate Bars.—Thomas Grate Bar Co. purchased cement-block plant at reported price of \$14,000 and will equip for manufacturing grate bars.

Ga., East Point.—Structural Steel.—Virginia Bridge & Iron Co., general offices at Roanoke, Va., advises Manufacturers Record that recently-reported East Point plant will cost about \$50,000; buildings to occupy about four acres of land; will include machine shop, power-house, templet shop, etc., of steel shaped by company; not prepared at present to state cost of machinery and capacity; complete plant by September 1.

Ky., Louisville.—Grate Bars, etc.—Henry M. Martin Manufacturing Co. will erect building for manufacturing grate bars and furnace castings; building 38x100 feet, equipped for daily output of five tons; entire building and equipment contracted for; construction begun. (Recently reported incorporated with \$10,000 capital stock.)

N. C., Rockingham.—Rockingham Machine Co. incorporated with \$15,000 capital stock by W. N. Everett, M. L. Hinson and T. C. Leak, Jr.; has purchased Rockingham Foundry & Machine Co.'s plant; will make additions and improvements; details not determined.

Okla., Muskogee.—Agricultural Implements. Muskogee Industrial & Improvement Co. purchased Eagle Manufacturing Co.'s plant (exclusive of buildings) at Armourdale, Kans., and will remove to Muskogee; will erect \$50,000 building; construction begun; will maintain branch office in Kansas City, Kans.

Okla., Oklahoma City.—Gas Generator.—Ideal Gas Generating Co., Enid, Okla., contemplates establishing plant to manufacture gas generator.

Okla., Tulsa.—Tools.—Finlayson & Son, Sistersville, W. Va., will establish machine shops in Tulsa; first building to be brick; 50x146 feet.

S. C., Bishopville.—Sign Machine.—R. F. Mason plans establishing factory for his patented lettering or drilling machine to make signs from wood, stone and metals; later will organize company to extend plant.

S. C., Greenville.—Machinery.—American Machine & Manufacturing Co., Charlotte, N. C., will increase capital stock by \$75,000; establish general manufacturing plant and contracting department at Greenville; continue Charlotte plant as repair shop.

Tex., Port Lavaca.—G. E. Ginter and J. L. Bennet, both of Houston, Tex., and associates organized company to erect machine shop.

Va., Richmond.—Grate Bars.—George Schantz, Buffalo, N. Y., is considering, it is reported, erection of plant to manufacture self-cleaning grate.

W. Va., Parkersburg.—Bottling Machinery. Standard Steel Bottling Machine Co. incorporated with \$6000 capital stock by J. T. Calman, H. B. Hogg, F. G. Davis, E. P. Grites and others.

GAS AND OIL DEVELOPMENTS

La., Lake Charles.—Twenty-One Oil Co. incorporated with \$21,000 capital stock; W. T. McKillip, president; J. H. Putnam, vice-president; E. N. Nutting, secretary-treasurer; W. T. Nutting, general manager.

La., New Orleans.—Godchaux Oil & Devel-

opment Co. incorporated with \$40,000 capital stock; C. L. Darragh, president; H. C. Chis olm, vice-president; Michel Levy, secretary; P. M. Godchaux, treasurer.

Okla., Bartlesville.—Equitable Oil Co. incorporated with \$25,000 capital stock by C. A. Collin, Flora D. Armstrong and A. T. Dumenil.

Okla., Randlett.—Basin Oil Co. incorporated with \$250,000 capital stock by Jerry Crowley of Randlett, R. H. Dearing, Dallas, Tex., and W. H. Stephenson, Batson, Tex.

Tex., Beaumont.—Ab Moore Oil Co. incorporated with \$3000 capital stock by J. A. Moore, J. B. Moore and W. M. D. Lee.

Tex., El Paso.—Purified Oil Co. incorporated with \$15,000 capital stock by F. J. Hall, F. W. Hall and T. Bailey.

Tex., Rising Star.—Rising Star Oil Co. incorporated with \$10,000 capital stock by J. M. Smith, J. N. Barnes and J. D. Head.

W. Va., Charleston.—West Virginia Central Gas Co. increased capital stock from \$500,000 to \$2,000,000; Howard A. Forman of Buffalo, N. Y., is president.

ICE AND COLD-STORAGE PLANTS

Ala., Birmingham.—J. J. Rogers Produce Co. contemplates installing refrigerating plant.

Ala., Foley.—Rockwith & Pepple purchased ice plant and will remodel; will erect building.

Ark., Conway.—R. B. McCulloch will double capacity of ice plant; machinery ordered.

D. C., Washington.—Washington Market Co., Pennsylvania Ave. corner 7th St. N. W., awarded contract to Samuel J. Prescott Company, 814 13th St. N. W., Washington, for repairing cold-storage warehouse at 11th and E Sts. S. W.; plans by D. J. Davis & Co., Chicago, Ill.; 100x100 feet; reinforced concrete; cost \$80,000; construction begun.

Ga., Macon.—Southern Ice & Coal Co. incorporated with \$50,000 capital stock by Jesse H. Hall, G. G. Toole and J. E. Hall; will erect plant to have daily capacity of 50 tons ice; estimated cost \$75,000; also install refrigerating plant to furnish refrigeration through brine and pipe system; building plans not determined. (See "Machinery Wanted.")

Ga., Milledgeville.—Milledgeville Ice Works will build plant; 25 to 40 horse-power; machinery not yet purchased. (See "Machinery Wanted.")

Ky., Lexington.—Consumers' Ice & Cold Storage Co. wires Manufacturers Record: "Will build plant of 75 tons capacity; plans for building not completed."

La., New Orleans.—United Fruit Co. will, it is reported, build precooling plant for tropical fruits; leased 300 by 600 site on water-front; plant to cost \$600,000 and have 24-hour capacity of 180 cars; to include 300x900-foot shed for cars and 60x30-foot plant proper. Company's president, C. H. Ellis, wires Manufacturers Record: "Cannot give any details as yet." Later, he writes: "Have several plans under consideration; likely consist of ice-house with capacity of 150 tons per day, with storage capacity of 1000 tons; will likely have open steel shed about 300 wide by 600 feet long."

Md., Williamsport.—Victor Cushwa & Sons will organize company to install \$20,000 ice plant.

Mo., King City.—City desires to grant franchise to erect ice plant in conjunction with electric light plant. (See "Electric-light and Power Plants.")

Tenn., Lebanon.—Davis Ice & Cold Storage Co. incorporated; S. R. Hawks, president; John L. Castleman, vice-president; B. H. Davis, secretary, treasurer and general manager; has established plant.

Tex., Austin.—T. B. Walker Manufacturing Co., Del Walker, manager, will erect refrigerating plant; three stories and basement; concrete basement; exterior wall of rock and interior of cork; in basement install 150-ton engine, ice machinery and ice vaults; basement on several levels; 25-foot depth for engine, another for cold storage and another for ice, etc.; upper floors for storage of groceries, fresh meats, etc.; construction begun.

Tex., Floresville.—J. H. Bell, San Antonio, Tex., is considering establishment of ice plant.

Tex., Bryan.—Commercial Club is corresponding with parties relative to establishment of cold-storage plant, etc. (See "Miscellaneous Factories.")

Tex., Menard.—E. C. Clark, Chicago, Ill., contemplates construction of ice plant.

IRON AND STEEL PLANTS

Ala., Gadsden—Rolling Mill.—Southern Iron & Steel Co., Birmingham, Ala., has ceased operating rolling mill and will make usual repairs; is also arranging to install machine to cold twist steel for reinforcing concrete and machine to straighten rails; bar twister will be driven by 75-horse-power electric motor; all contracts awarded.

Tex., San Jacinto—Steel Plant.—J. B. Gahnn, Brazos Hotel, Houston, Tex., and A. Kallman of New York, are, it is reported, planning incorporation of company with \$500,000 capital stock to build steel annealing plant on 15-acre site; will manufacture drill and tool steel, well drills, rock drills, etc.; Mr. Gahnn wires Manufacturers Record that details are not now available and he will furnish them as soon as possible.

LAND DEVELOPMENTS

Ala., Mobile.—Gulf Coast Fruit Farm Co. incorporated with \$100,000 capital stock by Charles E. Peters, William C. Payl and Chas. C. Paul.

Ala., Montgomery.—City will vote on \$25,000 bond issue for park purposes. Address The Mayor.

Ala., Summerdale.—Danville Sumatra Tobacco Co. incorporated with \$4000 capital stock by W. E. Farnum, P. E. Cramer and Charles Castle.

D. C., Washington.—Yellott & Stubblefield organized by R. E. L. Yellott, Maryland Bldg., and T. W. Stubblefield, 4610 16th St. N. W.; offices in Fourteenth Street Savings Bank Bldg.

Fla., Tampa.—Bayshore Development Co. purchased 40 acres at Hooker's Point and will develop as residential section; divide into building sites, pave streets, provide electric-light and water supply, etc.

Fla., Tampa.—Port Richey Company incorporated with \$100,000 capital stock; Peter L. Weeks, president; Josiah S. Weeks, Jr., secretary-treasurer; W. E. Guilford, general manager.

Fla., Tampa.—T. Roy Young, H. T. Lykes, John L. Branch, D. S. Wells and others purchased 120 acres for \$75,000; will subdivide and develop as residential section.

Ga., Valdosta.—Valdosta Pecan Plantation Co. (recently reported incorporated with \$25,000 capital stock by W. T. Staten, D. H. Breedlove and J. T. Blacklock) succeeds South Georgia Real Estate & Development Co.; will continue development of pecan groves; owns about 3000 acres land; sell in five-acre units.

La., Happy Jack.—Louisiana Orange Groves Co. incorporated with \$50,000 capital stock; acquired orange orchard; 160 arpents, of which 20 are devoted to orange trees; also contemplates acquiring other properties to develop for citrus fruits; George H. Penn, president; main office, 812 Hibernia Bldg., New Orleans, La. (Recently noted.)

La., Lake Charles.—Smith-Newman Land Co. purchased 50,000 acres land in Cameron parish; will construct canal to drain for development by cultivation; expects to have 5000 acres ready in fall; president, G. L. Smith, vice-president, John Holmes; secretary, C. W. Stanek; treasurer, George W. Newman; main offices to be at Lake Charles, with branch at Beaumont, Tex., and probably at Port Arthur, Tex. (Recently reported incorporated with \$2,500,000 capital stock.)

Md., Baltimore.—Ephraim Macht, Macht Bldg., 11-13 E. Fayette St., purchased 105 acres on Harford Rd. for \$150,000; will grade property, construct streets and avenues and develop as suburb.

Miss., Gloster.—Beaver Creek Land Co. incorporated with \$30,000 capital stock by L. L. Toler, S. A. Underwood and others.

Mo., Kansas City.—American Union Trust Co. purchased Golden Sunrise Farm for \$100,000.

N. C., Charlotte.—Interurban Land Co. organized with \$50,000 capital stock; Harvey Lambeth, president; S. E. Messner, vice-president; W. D. Wilkinson, secretary-treasurer; purchased 43 acres and will develop for residential purposes.

Okla., Hobart.—City will vote on \$30,000 bond issue for purchase of 30 acres for park purposes. Address The Mayor.

Okla., Muskogee.—Burlington Development Co. incorporated with \$5000 capital stock by O. W. Culp, C. A. Cowper and J. Frishman.

Tenn., Memphis.—Fidelity Land Co. incorporated with \$5000 capital stock by W. M. Hall, H. F. Hartwell, Clinton W. Schley and others.

Va., Norfolk.—Hampton Roads-Sewell's Point Corporation chartered with \$50,000

capital stock; Thomas H. Wilcox, president; R. D. Cooke, vice-president; Thomas H. Wilcox, Jr., secretary and treasurer.

Va., Norfolk.—Olney Place Corporation chartered with \$15,000 capital stock; W. H. White, Jr., president; George T. Banks, vice-president; T. P. Thompson, secretary; Braden Vandeventer, treasurer.

Va., Roanoke.—J. R. Hungerford, H. E. Black, W. W. B. Hedgepeth and I. F. Myers, all of Scranton, Pa., and John E. Walker and C. E. Lewis, Pittsburgh, Pa., purchased 10,000 acres on north side of Fort Lewis Mountain; will clear and divide into 10, 20, 25 and 50-acre tracts for apple cultivation; bench lands adjoining mountain tract to be divided into bungalow sites; probably Mason's Cove Orchard Co. will be organized with Mr. Hungerford as president.

W. Va., Morgantown.—Cheat River Development Co. incorporated with authorized capital \$50,000 by Charles W. Held, Willa L. Hyatt, John M. Gleason, Frank P. Weaver and Glenn Hunter.

LUMBER MANUFACTURING

Ala., Tuscaloosa.—Elledge Lumber Co. incorporated with \$5000 capital stock by David Crockett, R. V. Elledge and G. B. Worthen.

Ark., Sheridan.—B. G. Binnings Lumber Co., Turin, Ark., will rebuild plant recently reported burned (under Prattville, Ark.); open building proposals August 1 and machinery proposals August 15; capacity 1500 feet daily. (See "Machinery Wanted.")

Ga., Savannah.—Atlantic Log & Export Co. incorporated with \$15,000 capital stock by George W. Urquhart, Sidney C. McCandless and C. M. Gibbs.

Ky., Louisville.—J. F. Hillerich & Son incorporated with \$125,000 capital stock by J. A. Hillerich of Louisville, F. W. Brady and W. F. Goessling of St. Louis, Mo.

Ky., Louisville.—Norman Lumber Co. increased capital stock from \$50,000 to \$75,000.

Ky., Louisville.—Bluegrass Lumber Co. increased capital stock from \$50,000 to \$100,000.

Md., Prince Fredericktown.—Geo. D. Turner Lumber Co. will rebuild recently-burned sawmill; probably erected by makers; no buildings; capacity 300 railroad ties daily.

Miss., Bay St. Louis.—R. J. Williams Lumber Co. awarded contract to Standard Dry Kiln Co., Indianapolis, Ind., to erect brick dry kiln to replace burned plant; 24x105 feet. (Recently noted.)

Miss., Valley.—McGraw-Curran Lumber Co. incorporated with \$25,000 capital stock by Thomas McGraw, M. J. Curran and others.

S. C., Landrum.—Finger Lumber Co. incorporated with \$6000 capital stock by H. K. Finger, W. A. Anthony, R. L. Bunkhead and W. H. Moffitt.

N. C., Paintgap.—Charles M. Ray and Geo. M. Core, Charlotte, N. C., purchased several boundaries of dogwood timber in Yancey county and will manufacture into shuttles.

Tex., Corpus Christi.—Sibbury Lumber Co. increased capital from \$10,000 to \$50,000.

Tex., San Antonio.—Christian-Wathen Lumber Co. incorporated with \$15,000 capital stock by T. B. Wathen, Edward A. Christian, Sr., and Edward A. Christian, Jr.

Va., Richmond.—L. D. George Lumber Co. incorporated with \$100,000 capital stock; L. D. George, president, Penola, Va.; W. H. Harding, vice-president, Philadelphia, Pa.; W. H. Jennings, secretary, Penola, Va., and J. L. Blizard, treasurer, Richmond.

Miss., Hattiesburg.—Firm Lumber Co. incorporated with \$100,000 capital stock by D. E. McInnis, George Komp, C. Z. Stevens and Earl B. King; consolidates Rich Lumber Co. and Hattiesburg Ice & Coal Co.

METAL-WORKING PLANTS

Ark., Texarkana.—Tennison Bros. incorporated with \$92,000 capital stock; H. B. Tennison, president, Houston, Tex.; J. M. Tennison, vice-president; Miss M. E. Brannon, secretary; Allen Winham, treasurer, all of Texarkana; continue established plant.

Ga., Savannah.—Cans.—American Can Co. contemplates enlargement of plant.

Tex., Houston.—Brass.—Southern Brass Manufacturing & Plating Co., W. S. Farish, president, 517 Louisiana St., will install electro-galvanizing plant.

Va., Roanoke.—Culverts, etc.—Virginia Metal & Culvert Co., L. C. Stewart, president, will take over Virginia Metal Culvert Co.; possibly make enlargements later; manufactures metal culverts, pipe, etc. (Recently reported incorporated with \$150,000 capital stock under "Miscellaneous Enterprises.")

MINING

Ala., Eufaula.—Eufaula Mines Developing Co. incorporated with \$3000 capital stock by Carl W. Gust, James Blake and H. C. Blake.

Md., New Market.—Copper.—F. N. Maynard contemplates, it is reported, development of copper deposits.

Mo., Galena.—Eureka Mining Co. purchased, it is reported, interest in 40 acres mineral land and will install gas engine and 80-foot compressor costing \$12,000.

Mo., Kansas City.—Quindora Mining Co. incorporated with \$2000 capital stock by J. H. Knapp, L. C. Knapp, L. C. Buxton and others.

Mo., St. Louis.—Pyrites.—Pyrites Manufacturing Co. incorporated with \$25,000 capital stock by G. W. Hess, J. S. McIlvaney and Leroy Baker.

Okla., Oklahoma City.—Mid-Continent Mining & Milling Co. incorporated with \$300,000 capital stock by J. W. G. Martin, M. T. Reynolds, Z. M. Cunningham, J. M. Kelley and W. J. Davidson; company wires Manufacturers Record as follows: "Acreage 10; daily output 600 tons; plant \$40,000; buy machinery August 15." Mr. Martin is company's treasurer. (See "Machinery Wanted.")

Okla., Woodford.—Asphalt.—Oklahoma Asphalt & Refining Co., Ardmore, Okla., purchased plant of Chickasaw Asphalt Co.; has 80 acres land; daily capacity, six tons refined asphalt; S. L. Vandiver, president; H. S. Paschal, vice-president; J. F. Paschal, secretary-treasurer. (Recently noted incorporated with \$50,000 capital stock at Ardmore, Okla.)

N. C., Candor.—Uwarru Mining Co. incorporated with \$100,000 capital stock by James A. Parris, Cld. N. C.; George R. Gaither and H. Granger Gaither, both \$15 Gaither Estate Bldg., Baltimore, Md.

Tenn., Kingston.—Lone Mountain Co. incorporated with \$100,000 capital stock by R. B. Cassell, C. E. Hendrick, S. M. Joyner and others.

Tex., Adrian.—Salt.—J. P. Collier, president of First National Bank, plans organization of company capitalized at \$150,000 to develop salt deposits.

W. Va., Berkeley Springs.—Glass Sand.—Berkeley Glass Sand Co. chartered with \$200,000 capital stock to continue its established plant; states can mine 500 tons daily for several hundred years; now has operating mill of 125 tons daily output and will build another mill of 200 tons daily capacity; president, Henry P. Bridges; secretary, treasurer and manager, Nelson Perin; offices at 1103 Calvert Bldg., Baltimore, Md.

MISCELLANEOUS CONSTRUCTION

Ala., Montgomery.—Willow Mattresses.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., awarded contract to James Trainor, Little Rock, Ark., to sink willow mattresses to protect river front opposite union passenger station; estimated cost, \$15,000.

Ark., Point Pleasant (not a postoffice).—River Improvements.—Bids will be opened August 1 for construction of additional levee, about 250,000 yards. Maj. Clark S. Smith, U. S. Engineer Office, Memphis, Tenn., is in charge.

Fla., Jacksonville.—Causeway Filling.—Duval County Commissioners will receive bids until July 28 for filling on Duval causeway; Gail L. Barnard, County Engineer.

Fla., St. Petersburg.—Sea Wall.—City will construct 1200 feet of reinforced concrete sea-wall; bids opened July 29; W. F. Divine, City Clerk. (City recently stated to have voted \$35,000 bond issue for purchase and improvement of water-front lots.)

Ky., Louisville.—Dredging.—Sewer Commissioners will straighten, deepen and widen Beargrass Creek, which conveys storm water from eastern section of city.

La., New Orleans.—Wharf.—Engineer of Dock Board will prepare specifications for proposed wharf to be erected at Press St. by city and New Orleans & Northeastern Railroad.

La., Port Allen.—Commissioners Atchafalaya Basin Levee District will construct Belair and Levert Levee; former to be 1500 feet long and contain 50,000 cubic yards; latter to be 7500 feet long and contain 240,000 cubic yards; Board of State Engineers, New Orleans, will receive bids until July 26. (See "Machinery Wanted.")

Mo., St. Joseph.—Subways.—Seitz & Peterman prepared preliminary plans for constructing subways at crossings north and south of Union passenger station on 6th St.; estimated cost \$130,000; plans on file with City Engineer.

N. C., Oriental.—Bulkhead.—Oriental Bulk-

head & Improvement Co. incorporated with \$15,000 capital stock by L. B. Midgett, B. F. Pickyles, A. H. Stephens, R. A. Dudley and others.

S. C., Charleston.—Docks.—Coe-Mortimer Co. of New York, T. D. Darlington, manager Southern department, advises Manufacturers Record it is not ready to announce details of proposed docks. (Recently mentioned.)

Tenn., Memphis.—Levee.—Shelby county will construct levee across Hatchie River bottom on Fite Ave., requiring about 90,000 cubic yards of earth; bids received until July 17; P. St. George Richardson, County Engineer.

Tenn., Memphis.—Earthwork.—Mississippi River Commission, First and Second District, U. S. Engineer Office, Courthouse, Memphis, receives bids until August 1 for constructing 250,000 cubic yards earthwork in Lower St. Francis Levee District; Clarke S. Smith, Major, Engineers. (See "Machinery Wanted.")

Tex., Fort Worth.—City will construct dam; 200,000 cubic yards of earthwork and 60,000 cubic yards of masonry; also concrete pipe line six and a half miles long; bids received until September 5; details on application to Board of Engineers, City Hall. (See "Machinery Wanted.")

Tex., Galveston.—Dredging.—Government awarded contract to Bowers Southern Dredging Co. of Galveston at 11 cents per cubic yard to dredge channel to Harbor Island; channel to be 3000 feet long, 20 feet deep and 1200 feet wide between Harbor and St. Joseph's Island; from upper end, channel 400 feet wide, extending in northerly direction toward Rockport, distance of 5420 feet; about 1,200,000 yards of material is to be removed; bids will be opened in August for construction of rock breakwater 10,000 feet long on St. Joseph's Island, which is part of same harbor project.

Tex., Houston.—Pier.—Southern Pacific Terminal Co. will soon begin rebuilding Pier C, burned previously at loss of about \$120,000; pier and warehouse will be of reinforced concrete, fireproof throughout; sheds will be 70x1000 feet. (Previously mentioned.)

Tex., Port Bolivar.—Ore Docks.—Gulf, Colorado & Santa Fe Railway, F. G. Pettibone, general manager, Galveston, Tex., will build temporary dock for iron ore and plans permanent dock. Mr. Pettibone wires Manufacturers Record as follows: "Ore dock will cost about \$23,000; frame construction; about 28 feet wide by 300 feet long; 50 feet high; 10 per cent. approach; cars to be handled with gasoline-engine hoist; capacity 80 cars per 10 hours; work by own forces."

MISCELLANEOUS ENTERPRISES

Ala., Birmingham.—Asphalt Paving.—Southern Asphalt Construction Co. incorporated with \$5000 capital stock by J. R. Copeland, J. E. Donelson and Eugene Files.

Ala., Birmingham.—Publishing.—Quick Action Cottonseed Calculator Co. incorporated to introduce device and copyright book on quick action cottonseed calculating; capital stock \$2000; Ben L. Dilger, president; John J. Kyser, secretary-treasurer.

Ga., Macon.—Creosoting Plant.—Central of Georgia Railway, C. K. Lawrence, chief engineer, Savannah, Ga., is said to have appropriated over \$100,000 for construction of creosoting plant; Mr. Lawrence wires Manufacturers Record: "Matter indefinite; no particulars to give out at present."

Ga., Moultrie.—Wiley Fletcher & Co. will erect garage; one story; brick; 75x100 feet; will install machinery for repair work; G. W. Milligan has contract for erection.

Ky., Louisville.—Printing.—Standard Printing Co. purchased Globe Printing Co. and will operate plant; D. B. G. Rose, president; James R. Lewis, vice-president; John M. Cowles, secretary-treasurer; Edward Gottschalk, superintendent; has leased building. (Recently noted incorporated with \$75,000 capital stock.)

Ky., Louisville.—Plumbing Supplies.—Falls City Plumbing Supply Co. incorporated with \$25,000 capital stock by J. B. Matthews, Joseph Solinger and others.

La., New Orleans.—Garage.—Pelican Garage and Automobile School incorporated with \$25,000 capital stock; Albert Coguenhem, president; James R. Stewart, vice-president; William F. Denny, secretary-treasurer.

La., New Orleans.—Automobiles.—Kreher Auto Co. incorporated with \$10,000 capital stock by Charles, Bertha and Charles W. Kreher.

Md., Baltimore.—Contracting.—Columbus Construction Co. incorporated with \$100,000 capital stock by Henry W. Williams of Williams, Thomas & Williams, 606-509 Fidelity Bldg., Charles and Lexington Sts.; William A. Millen and F. C. Wales.

Mo., St. Louis—Publishing.—Taylor Publishing Co. incorporated with \$50,000 capital stock by Hugh K. Taylor, Henry D. Sum, Thomas C. Ryan and H. L. Descond; to publish Journal of Agriculture.

Mo., St. Louis—Auto Supplies.—Neustadt Auto Supply Co. will occupy building (to be erected); two stories; 56x100 feet; cost \$35,000; will not own structure.

Mo., St. Louis—Supplies.—Valley Supply Co. incorporated with \$10,000 capital stock by Jacob Frank, Paul H. Grissow and Charles Morsey.

Mo., St. Louis—Publishing.—Taylor Publishing Co. incorporated with \$50,000 capital stock by Hugh K. Taylor, B. L. Desmond, Thomas C. Ryan and others.

N. C., Fayetteville—Refuse Crematory.—City will build crematory for trash; E. A. Poe, chairman of sanitary committee. (See "Machinery Wanted.")

N. C., Greensboro—Printing.—J. J. Stone will erect \$2000 addition to printing plant.

N. C., Winston-Salem—Printing.—Winston Printing Co. continues plant of Winston Printing Co. at Cherry and 4th Sts.; will make improvements; Frank Brumley is president; O. Sadler, vice-president; Charles A. Ellis, secretary and manager. (Recently reported incorporated with \$100,000 capital stock.)

Tenn., Chattanooga—Garage.—Chattanooga Automobile Co., Charles Forstner, manager, will erect garage; three stories; fireproof; concrete; plate-glass windows; site 50x118 feet; cost \$20,000; plans by Barnwell & Jones, The Elizabeth, Chattanooga.

Tenn., Chattanooga—Garage.—Stone Fort Land Co. will, it is reported, erect garage; fireproof; one story and basement; Ford Sales Co., 18 William St., to be lessee.

Tenn., Chattanooga—Printing.—Chattanooga Times Co. will erect addition to printing plant; three stories; brick; will be occupied by job printing department; site has frontage of 50 feet; plans by Adams & Aisup of Chattanooga.

Tenn., Memphis—Tires and Vulcanizing.—Six Thirty-eight Tire & Vulcanizing Co. incorporated with \$100 capital stock by Walter Hunter, Geo. P. Pope, R. D. Foley and others.

Tex., Abilene.—Modern Steam Laundry, Box 455, organized with S. D. Hunter, president; H. N. Hickman, vice-president; L. P. Ligon, secretary; cost of building and machinery, \$13,000; no contracts. (Recently noted incorporated with \$20,000 capital stock.)

Tex., Berclair—Garage.—W. D. Ellis will erect garage.

Tex., Crockett—Garage.—F. B. Webb and R. B. Hogue will establish garage in building to be erected; install machinery costing about \$5000.

Tex., Smithville—Laundry.—R. L. Courtney and Mr. Garrett, Bartlett, Tex., contemplate erection of steam laundry.

Va., Chatham—Printing.—Chatham Enterprise organized with James L. Tredway president, E. S. Reid vice-president, T. A. Watkins secretary-treasurer; will establish printing plant and publish semi-weekly paper; purchased cylinder press, linotype machine and job printing plant; C. R. Warren, editor and general manager.

Va., Grottoes—Building.—Eutler Bros. will re-erect building reported burned; one-story brick structure 45x90 and 35x50 feet; will install second-hand woodworking machinery. (See "Machinery Wanted.")

Va., Norfolk—Automobiles.—Jefferson Automobile Corporation incorporated with \$10,000 capital stock; C. M. Barry, president; James E. Barry, secretary; R. Franck Taylor, vice-president and treasurer.

Va., Roanoke—Laundry.—Roanoke Steam Laundry, Wm. F. Rea, president, 331 Salem Ave. S. W., will purchase machinery at estimated cost of \$3000 for laundry recently mentioned; building to cost within \$6000; contractors, Shockey & Fields, Roanoke; construction progressing; L. S. Jones, manager. (See "Machinery Wanted.")

Va., Roanoke—Mineral Water.—Crockett Springs Corporation incorporated with \$200,000 capital stock; George W. Hodge, president, New York; C. W. Thomas, vice-president, Roanoke; M. C. Thomas, secretary-treasurer, Crockett Springs, Va.

W. Va., Grafton.—D. M. Dunn Manufacturing Co. incorporated.

MISCELLANEOUS FACTORIES

Ala., Anniston—Gas Tank.—Anniston Electric & Gas Co. will install new tank and boiler in gas plant; new and old tanks will have combined capacity 140,000 cubic feet of gas.

Ala., Bay Minette—Syrup Refinery.—Farmers' Gin Co. will install syrup refinery.

Ala., Birmingham—Railroad Switch.—Morrison Frogless Switch Co. organized by H. W. Morrison and others to manufacture patented frogless switch; offices in Brown-Marx Bldg.

Ala., Birmingham.—Birmingham Railway, Light & Power Co. will erect gas tank; cost \$25,000.

Ala., Gadsden.—Etowah County Nova Kola Co. incorporated with \$15,000 capital stock by Fred. Averett, president; C. R. Porter, vice-president, and L. A. Porter, secretary.

Ala., Summerdale—Tobacco.—Danville Sumatra Tobacco Co. incorporated with \$4000 capital stock; W. E. Farnum, president; George Castle, vice-president; George C. McCanna, secretary-treasurer, all of Danville, Ill., and C. E. Tucker of Summerdale, general manager.

Fla., Miami—Cigars.—Hill Bros. will erect cigar factory; 25x75 feet; two stories; concrete; contract awarded to Art Stone Construction Co. of Miami.

Ga., Columbus—Medicine.—Gary-Stanley Medicine Co. incorporated with \$5000 capital stock by P. Gary, A. Stanley and D. L. Parmer.

Fla., Tampa—Cigars, etc.—P. Verplanck & Co. incorporated with \$200,000 capital stock; Philip Verplanck, president; F. M. Simonton, vice-president; Philip Verplanck, general manager; C. J. Morrow, secretary-treasurer.

Fla., Tampa—Corral, Wodiska y Ca. will be incorporated with \$100,000 capital stock; continue cigar factory at Michigan Ave. and 14th St.; contemplates improvements; temporary officers will be Manuel Corral, president and general manager; Francisco Sierra, treasurer; E. C. Phillips, secretary.

Ky., Louisville—Motor Vehicles.—Oldsmobile Co. incorporated with \$10,000 capital stock by T. F. Smith of Louisville, W. J. Mead and R. N. Mosher, both of Lansing, Mich.

Ky., Nicholasville.—G. & B. Gerdes Co., Cincinnati, O., will improve distilling plants and install power plant.

La., Milton—Sugar.—Leon Godechaux Company, New Orleans, La., will, it is reported, establish sugar refinery.

La., Crowley—Rice Mill.—Brown Rice Milling Co. organized with \$40,000 capital stock; will own and operate Rice City mill; Alexander Brown (manager White Swan Rice Mill), Morse, La., is president and general manager; W. E. Ellis, vice-president; H. M. Bone, secretary-treasurer, both of Crowley.

La., Opelousas—Sugar Refinery.—Opelousas Sugar Co. (recently noted to erect refinery) will establish plant with daily capacity of 82,500 pounds; machinery purchased; will erect mill-construction building costing about \$100,000; date of opening building proposals not yet set; L. E. Little, president; M. J. Tiernan, vice-president, manager and construction engineer; Geo. B. Cooke, secretary.

La., Shreveport.—E. M. Turner, Assistant City Engineer, Shreveport, La., contemplates establishment of pearl-button factory. (See "Machinery Wanted.")

Md., Baltimore—Clothing.—Southern Manufacturing Co. incorporated with \$2000 capital stock by Morris D. Robinson, 235 Galtier Estate Bldg.; Isadore Pearlman and Benjamin O. Kedam.

Md., Baltimore—Fire Extinguisher and Chemical.—Pyrene Manufacturing Co., 114 Keyser Bldg., elected William Wallace Lannan, president; Thomas A. Whelan, Jr., vice-president; Henry Lay Duer, secretary-treasurer; V. C. Leftwich, manager. (Recently noted incorporated with \$10,000 capital stock.)

Md., Baltimore—Dairy.—Pikesville Dairy Co. increases capital stock from \$20,000 to \$50,000.

Miss., Canton—Peanuts.—Southern Peanut Co. incorporated with \$10,000 capital stock by L. Foot, Emile Levy, J. T. Caldwell and others.

Mo., St. Louis—Millinery.—Crown Millinery Co. leased three-story building at 16th and Morgan Sts. containing about 24,000 square feet floor space and will equip for manufacturing millinery.

Mo., St. Louis—Tires.—John B. Shea and associates will erect building to be occupied by Firestone Tire Co.; structure will be two stories and basement; fireproof; cost about \$50,000. (Recently mentioned.)

Mo., St. Louis—Rice.—H. L. Ponder and S. C. Dowell, Walnut Ridge, Ark., are promoting establishment of rice mill; Messrs. Ponder and Dowell are registered at Planters' Hotel, St. Louis.

Mo., St. Louis—Suits.—Hetzl Suit Co. incorporated with \$12,000 capital stock by Louis W. Hetzel, C. E. Hodde, James Gutney, Jr., and others.

Mo., St. Louis—Upholstering.—F. Burkhardt Manufacturing Co. purchased site 210x150 feet; will erect addition to plant and double capacity; new building to be three stories, brick, and cost \$50,000.

Mo., St. Louis—Plumbers' Supplies, etc.—Standard Sanitary Manufacturing Co. of Missouri incorporated with \$2000 capital stock by John D. Senden, Eustace C. Wheeland and George W. Franzheim.

Mo., St. Louis—Tools.—Williams N. Davis of Matthews-Davis Tool Co., 3910 N. Broadway, contemplates establishment of tool factory on Forest Park Blvd.

Mo., St. Louis—Bakery.—J. Hahn Bakery Co. will erect addition, doubling capacity of bakery; purchased site 94x135 feet; cost about \$25,000.

Mo., St. Louis—Shoes.—Shoe Manufacturers' Alliance, Jackson Johnson, president, will build shoe factory.

Mo., St. Louis—Electrical Devices.—Electric Resistance Co. incorporated with \$2000 capital stock by William A. Phillips and Frank M. Rumbold, Jefferson City, Mo.; Jas. H. McCord, St. Joseph, Mo., and others.

N. C., Brevard—Lime.—King Lime & Fertilizer Co. plans to construct three miles of railway and install about six perpetual lime kilns, one or more large stone crushers, and accompanying equipment, costing about \$125,000; organized with R. Mays Cleveland of Marietta, S. C., as president; C. C. Good, vice-president and treasurer; J. D. Good, secretary, both of Greenville, S. C. Correspondence regarding machinery should be addressed to C. C. Good, care Greenville Trust Co., Greenville, S. C. (Recently reported incorporated with \$250,000 capital stock.)

N. C., Oxford.—A. H. Powell is corresponding with parties relative to establishment of overall factory.

N. C., Durham—Automobiles.—Mangum-Morris Company incorporated with \$10,000 capital stock; R. F. Mangum, president; J. D. Morris, secretary-treasurer.

N. C., Winston-Salem—Paper Boxes.—Carolina Paper Box Co. increased capital stock to \$50,000; no improvements contemplated.

Okla., Ardmore—Asphalt.—Oklahoma Asphalt & Refining Co. incorporated with \$50,000 capital stock by J. H. Paschal, T. W. Carbutt and C. C. Spindler.

Okla., Bartlesville.—Black's Insecticide Co. incorporated with \$1000 capital stock by John Sanderson and L. G. Owen of Bartlesville and H. H. Black, Toledo, O.

Okla., Devils Den (not a postoffice)—Smelting and Refining.—Johnston County Smelting & Refining Co. incorporated with \$100,000 capital stock by S. H. Ballard, B. Halstead and J. H. English, all of Tishomingo, Okla.

Okla., Oklahoma City—Showcases.—Southwestern Showcase Manufacturing Co., J. M. Brown, president, 21 N. Orchard St., will re-build plant recently reported burned; open proposals in September on buildings to cost \$5000; plans by Mr. Brown. (See "Machinery Wanted.")

S. C., Chester—Overalls.—D. M. Peden and S. C. Carter are promoting organization of company with capital stock of \$10,000 to establish overall factory.

S. C., Columbia—Cigars.—Metropolitan Cigar Co. incorporated with \$2000 capital stock; H. M. Burns, president and treasurer; V. S. Lewis, secretary.

S. C., Columbia.—Rubber Stamps and Seals.—Columbia Stamp & Seal Co. incorporated with \$2000 capital stock by James G. Holmes and E. G. Gooding.

Tenn., Memphis—Wood Distillation.—Forest Products Chemical Co. incorporated with \$100,000 capital stock to manufacture acetate of lime, wood alcohol, charcoal and wood tar oils; buildings to cost \$15,000; site comprises five acres; James C. Lawrence, resident manager; James Lawrence, in charge of building construction. Address James C. Lawrence, care of Bureau of Publicity and Development of Business Men's Club.

Tex., Bryan—Creamery.—Commercial Club is corresponding with Palestine (Tex.) parties relative to establishment of creamery, cannery and cold-storage plant.

Tex., Donna—Brooms.—Mr. Wilson and associates will, it is reported, erect factory to be equipped with power machinery and have capacity of 600 brooms daily.

Tex., El Paso—Paper.—Madera Land & Lumber Co., Dr. F. S. Pearson, president, 20 Exchange Pl., New York, is reported as to build \$1,500,000 to \$2,000,000 mill for manufacturing wrapping paper; Dr. Pearson's offices wire Manufacturers Record: "Unable to supply information prior to Pearson's return next week." (See "Woodworking Plants.")

Tex., Jacksonville.—Miller Brooks Manufacturing Co. incorporated with \$35,000 capital stock by F. J. Miller, A. L. Brooks and R. C. Miller.

Tex., Houston.—Texas Manufacturing Co. incorporated with \$50,000 capital stock by Douglas Burnett, B. F. Bonner and R. W. Weir.

Tex., Waxahatchie—Medicine.—Waxahatchie Medicine Co. incorporated with \$25,000 capital stock by J. S. Herring, W. E. Crow and W. K. Ward.

Tex., Wichita Falls—Candy.—Lone Star Candy Co. organized; will erect building.

W. Va., Davis—Bakery.—Pure Food Baking Co., authorized capital \$5000, chartered by W. Hoffman, B. T. Walters, O. H. Digman, L. N. Mott, Ed Walters and Jos. C. Hoffman.

W. Va., Wheeling—Beds.—Sterling Bed Co. increased capital stock from \$40,000 to \$75,000.

W. Va., Wheeling—Musical Instruments.—Lindloff Piano Co. of 37 11th St. incorporated with \$50,000 capital stock by C. L. Lindloff, Albert Flading and John P. Merschard of Wheeling, Fred P. Damsel of Elm Grove, W. Va., and others.

RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ga., Moultrie.—Valdosta, Moultrie & Western Railroad, Gordon Tillman, chief engineer, will, it is reported, improve terminal facilities at Moultrie. (See Ga., Valdosta.)

Ga., Savannah.—Seaboard Air Line Railway, W. L. Seddon, chief engineer, Portsmouth, Va., sends Manufacturers Record further details of Hutchinson Island terminal improvements; will extend slip No. 3 by 30 feet and dredge to depth of 22 feet, dredging to be completed by August 15; will extend east side fertilizer warehouse with 20-foot wharf by 490 feet; this 490-foot extension to be of wood construction on pile foundation and have magnesia roof covering, divided into separate division by fire walls; erect fertilizer shed, on west side of No. 3 slip, of same construction and 50x400 feet, with 20-foot wharf; contractors for buildings and wharves, Burwell & Hillyer of Jacksonville, Fla.; contractor for dredging, Atlantic, Gulf & Pacific Company of New York; cost of improvements, \$100,000. (Briefly outlined last week.)

Ga., Valdosta.—Valdosta, Moultrie & Western Railroad, Gordon Tillman, chief engineer, will, it is reported, erect shops, build yards and improve terminal facilities, both in Valdosta and Moultrie; proposes to issue \$50,000 of bonds for various purposes, including improvements.

Miss., Laurel.—New Orleans, Mobile & Chicago Railroad, W. F. Owen, general manager, Mobile, Ala., will establish repair shops.

Tex., Slisbee.—Gulf, Colorado & Santa Fe Railway awarded contract to H. D. McCoy, Cleburne, Tex., to extend engine-house and boiler-room; cost about \$22,000. (Recently mentioned.)

ROAD AND STREET WORK

Ala., Anniston.—Calhoun county will vote November 15 on \$300,000 bond issue for road improvements. Address County Commissioners.

Ala., Lafayette.—Chambers county will expend about \$7000 to construct road from Lafayette to Randolph county line via Buffalo, Five Points, Stroud and Welsh; Roanoke, Ala., has agreed to continue improvement of road from county line to Roanoke, 3½ miles. Address County Commissioners.

Ala., Roanoke.—Randolph county will construct road from Roanoke to Georgia State line via Rock Mills; estimated cost \$4300. Address County Commissioners, Wedowee, Ala.

Ala., Selma.—City passed ordinance to pave Broad St. from Dallas St. to Union station, distance of five blocks. Address The Mayor.

Ala., Wetumpka.—Elmore county will construct 24 miles of sand, clay and gravel roads; bids received until July 21; also 8 miles of sand-clay road; bids received until August 1; C. L. Strange, County Engineer. (See "Machinery Wanted.")

D. C., Takoma Park.—Town Council appropriated \$1900 for sidewalks improvement and extension; of this \$1400 is to be expended on Ethan Allen Ave. and \$500 on Carroll Ave. W. G. Platt, Mayor, states it is proposed to lay 15,000 square feet cement sidewalks this season; of this amount contract was awarded to A. S. Baird of Takoma Park for about 2500 square feet; plans not definite relative to remainder.

D. C., Washington.—District of Columbia

will expend \$75,000 to construct 70,000 yards of cement sidewalks; contract recently noted awarded to Warren F. Brenizer Company, 111 Q St. N. W., Washington.

Fla., Bronson.—Levy county will vote in September on \$100,000 bond issue for construction of roads. Address County Commissioners.

Fla., Palatka.—City voted \$15,000 bond issue to pave streets with vitrified brick. Address The Mayor.

Ga., Americus.—City awarded contract for street paving and sewer extension to cost \$50,000; contract for 45,000 square yards of paving awarded to Crescoted Wood Block Paving Co., Gulfport, Miss., at \$2.21 per square yard, and for 7700 cubic yards of grading at 35 cents per cubic yard. (Lately noted.)

Ga., Cedartown.—City will excavate Cemetery Hill on East Ave.; bids received until August 4; D. M. Russell, Mayor. (See "Machinery Wanted.")

Ga., Darien.—McIntosh county will vote on \$30,000 bond issue for road construction. Address County Commissioners.

Ga., Lagrange.—City awarded contract for paving sidewalks on Church, Broad and Vernon Sts. and Ridley Ave.; concrete paving to Wright & Son, and tiling to Pike Bros. Lumber Co.; Church and Vernon Sts. to be paved with concrete; other paving material not decided. Address The Mayor.

Ga., Macon.—Legislature authorized Bibb county to vote on \$300,000 bond issue for road and bridge construction; election in fall. Address County Commissioners.

Ga., Rome.—City will pave parkways on Broad St. from 2d to Sixth Ave. with vitrified brick, North Broad St. from Sixth Ave. to Ross St. and Fifth Ave. from bridge across Oostanula River to West 7th St. with wood blocks, and South Broad St. from Etowah River to Main St. with asphalt macadam; awarded contract to Jamison & Hollowell, Montgomery, Ala., at \$13,304 for vitrified brick paving, comprising 4300 square yards surface and 2000 yards track; to Crescoted Wood Block & Paving Co., Gulfport, Miss., at total of \$55,317 for wood-block paving, of which \$35,942 is for 14,000 yards of surface and 350 yards track on N. Broad St., and \$19,375 for 7550 yards surface and 50 yards track on Fifth Ave.; Southern Asphalt & Paving Co., Birmingham, Ala., at \$3,769.40 for S. Broad St. paving, comprising 10,300 yards asphalt macadam surface and 350 yards of track, which will be paved with vitrified brick; total amount of contracts \$98,390.40.

Ky., Paris.—City will construct 30 concrete sidewalks. Address The Mayor.

La., Crowley.—City awarded contract to DeJessey & Ellison of Crowley to construct four-foot cement sidewalks on 260 additional blocks; crossing contract awarded to company of Pine Bluff, Ark.

La., Hammond.—City will construct 6½ miles of concrete sidewalks; bids received until August 10; M. C. Wilson, Mayor. (See "Machinery Wanted.")

La., New Orleans.—City will construct sidewalks, subsurface drains, culverts, curbs and gutter bottoms on St. Charles St. from Poydras to Gravier St.; bids received until July 24; Charles R. Kennedy, Comptroller. (See "Machinery Wanted.")

La., New Orleans.—City will repave with small granite blocks, install subsurface drains, culverts, curbs, gutter bottoms and pave sidewalks on Poydras and Lafayette Sts. from Delta St. to Dock Board's granite block roadway pavement; bids received until July 24; Charles R. Kennedy, Comptroller. (See "Machinery Wanted.")

La., Shreveport.—City will construct 20,000 square yards of brick paving, 50,000 square yards of wood block, 53,000 square yards of sheet asphalt, 60,000 square yards of asphalt concrete, 49,000 square yards of bituminous concrete, 10,000 square yards of concrete; bids received until July 27; L. H. Baker, secretary-treasurer. (See "Machinery Wanted.")

Md., Rockville.—Montgomery County Commissioners voted issuance of \$12,000 road bonds. Address County Commissioners. Lately noted.

Md., Brooklyn.—Anne Arundel county will grade and surface with macadam Patapsco Ave. in Brooklyn from 1st St. to Pennington Ave., one mile; bids received until August 1; E. T. Hayman, Road Engineer, Annapolis, Md. (Date of opening bids has been postponed from July 5, as lately stated, to August 1. See "Machinery Wanted.")

Md., Frostburg.—City will grade and pave Broadway (450 feet), Mechanic St. (300 feet) and Water St. (500 feet); bids received until July 31; John J. Price, chairman Street Committee. (See "Machinery Wanted.")

Md., Towson.—State Roads Commission, Union Trust Bldg., Baltimore, Md., and Baltimore County Commissioners will improve York Rd. from city limits of Baltimore to Towson, about six miles; estimated cost, \$6000; plans not determined.

Miss., Brookhaven.—District No. 1 of Lincoln county will grade and gravel 28 miles of road and construct necessary bridges and culverts; roads to be surfaced 14 and 9 feet; about 110,000 cubic yards grading; 168,500 square yards gravel surface; 500 yards concrete; 1600 linear feet vitrified pipe; bids received until August 7; H. Cassidy, chairman District Highway Commissioners. (See "Machinery Wanted.")

Mo., St. Louis.—City will reconstruct Benton St. from 12th St. to Jefferson Ave. Address Mayor Kreismann.

N. C., Charlotte.—City awarded contract to West Construction Co., Chattanooga, Tenn., for 58,400 square yards of paving with following materials: Bitulithic, from McDowell St. to Pecan Ave. and from 11th St. to Seaboard Air Line Railway passenger station; balance in Bermudez asphalt; brick gutters on W. Trade St. from Mint St. to Southern Railway, and on N. Tryon St. from 6th to 9th St.; total amount of contract is about \$150,000; contract for curbing awarded to Johnson, Porter & Peck and J. W. Haas. (Recently mentioned.)

N. C., High Point.—City awarded contract to D. K. Hall for macadamizing and curbing streets; estimated cost \$40,000. J. A. Johnson made surveys; Fred N. Tate, Mayor. (Recently mentioned.)

N. C., Salisbury.—Rowan County Commissioners' plans for construction of road from China Grove to Saw includes one mile stone and four miles sand and clay; grading will require removal of 20,000 cubic yards of sand and clay 16 feet wide and 5 to 8 inches deep; contract (recently noted) awarded to W. A. Foil & Co., Concord, N. C.

N. C., Spring Hill.—Spring Hill Township voted bond issue for road construction. Address Halifax County Commissioners, Halifax, N. C.

N. C., Tarboro.—Sprodtbeck Bros., Middletown, O., are lowest bidders for paving 25,000 square yards on Main St.; plans and specifications by Gilbert C. White, engineer, Durham, N. C. (Call for bids lately noted.)

N. C., Winston-Salem.—City will vote August 8 on issuance of \$75,000 of bonds for street and sidewalk paving. Address The Mayor. (Recently mentioned.)

Okla., Altus.—City will improve Main St. with bitulithic; bids received until July 24; Blair L. Boyle, City Engineer. (See "Machinery Wanted.")

Okla., Muskogee.—City awarded contract to Levy and Levy at about \$30,000 for Gilsonite paving in Street Improvement Districts 122 and 125.

Tenn., Chattanooga.—Ed D. Bass, chairman Road Commissioners, will receive bids until July 19 for vitrified brick or bituminous macadam paving, curbing, gutters, drainage and grading on Main St. and Georgia Ave. (See "Machinery Wanted.")

Tenn., Nashville.—Board of Public Works awarded contracts to Foy-Proctor Company of Nashville for granite curbs and sidewalks on S. 5th St., Sylvan Ave., S. 11th St., Ligon La. and Wichita Ave.

Tex., Brady.—Road District No. 1, McCulloch county, voted June 3 on \$75,000 bond issue for improvement of roads; Harvey Walker, County Judge. (Previously noted.)

Tex., Brownsville.—City will construct 27,500 square yards street paving with brick, creosoted wood block or bitulithic; bids received until August 15; Benjamin Kowalski, Mayor. (See "Machinery Wanted.")

Tex., Canadian.—City will construct cement sidewalks, gutters and curbs, and grade streets; estimated cost \$23,000. Address The Mayor.

Tex., Childress.—Precinct No. 1 of Childress county contemplates voting on \$50,000 bond issue for road construction. Address County Commissioners.

Tex., Longview.—County Judge J. H. McHaney advises Manufacturers Record that \$150,000 is available for construction of rock road, and sand and clay road; engineer not yet employed; county will "probably do the work straight." (Bond issue recently noted.)

Tex., Stamford.—City will pave four additional blocks. Address The Mayor.

Tex., Temple.—City awarded contract to Gekander Bros. of Waco, Tex., to construct about 20 blocks of pavement; materials will be vitrified brick and Hassam compressed concrete; amount available, \$20,000; R. T. Smith, City Engineer. (Recently noted.)

Tex., Wichita Falls.—Wichita county will

vote on \$200,000 bond issue for road construction. Address County Commissioners.

Va., Danville.—City voted \$30,000 bond issue to repave N. Main St. Address The Mayor. (Recently mentioned.)

Va., Highland Park, P. O. Richmond.—City contemplates street and sidewalk improvements; bids for ascertaining proper grade lines and for furnishing profiles of same received until July 17; A. C. Maynard, Town Superintendent, Highland Park; Charles H. Kastelberg, chairman, 1710 E. Main St., Richmond, Va.

Va., Lynchburg.—Lynchburg Automobile Club, Dr. John W. Carroll, secretary, is promoting construction of road from Lynchburg to Natural Bridge, 36 miles; Peyton B. Winfree and C. L. DeMott, engineers, have viewed proposed route and submitted report, saying plan is feasible; estimated cost \$5000; present dirt and stone road to be rebuilt; no contracts to be let.

Va., Norton.—City is preparing to issue \$35,000 bonds for street improvement. John Roberts, Mayor.

Va., Norton.—John Roberts, Mayor, states Wise County Commissioners contemplate construction of 14 feet of macadam road through city this fall in connection with bond issue previously noted of \$700,000; if this is done city will supplement work and macadamize entire street, finishing same with asphalt or tarvin binding; also plans macadamizing Park Ave.; has \$5000 available.

W. Va., Bramwell.—City Council adopted ordinance to issue \$6000 bonds to complete macadamizing of roads and streets; J. A. Waddell, Mayor.

W. Va., Bluefield.—City will grade, macadamize and curb S. Bland St. from end of present brick paving to Bowyer St.; bids received until July 23; J. T. Akers, Auditor. (See "Machinery Wanted.")

W. Va., Benwood.—City will pave 1st St. from Jacob to Water Sts.; bids received until July 24; Paul A. Dechan, City Clerk. (See "Machinery Wanted.")

W. Va., Huntington.—City awarded contract to George Hinkle to pave cemetery hill road.

SEWER CONSTRUCTION

Ala., Ensley.—Jefferson County Board, Birmingham, Ala., awarded contract at \$48,408.75 to Thomas Worthington, Birmingham, for construction of septic tank, sedimentation basin, filter beds, etc.; L. H. Saltern, sanitary engineer, Birmingham, Ala. (Lately noted.)

Ala., Fayette.—City will vote July 24 on bond issue for sewer system. Address The Mayor.

Ga., Macon.—City awarded contract for laying sewer and water mains in South Macon and North Highlands; cost \$35,000. Address The Mayor. (Lately noted.)

Ala., Montgomery.—City will vote on \$50,000 bond issue for sanitary sewer construction. Address The Mayor.

Fla., Clearwater.—City will construct 8-inch sewer on Pierce St., Garden Ave., Waterson St. and Bay St.; bids opened; T. J. Sheridan, Clerk.

Ga., Americus.—City awarded contract for sewer extension and street paving; cost \$250,000; contract for sewer work awarded to P. J. Curran, Knoxville, Tenn. (Lately noted.)

Ky., Greendale.—Prison Commissioners, State Capitol, Frankfort, Ky., will construct septic tank and filter bed system of sewerage disposal at Kentucky Houses of Reform; bids received until August 1; Eli H. Brown, Jr., chairman of Commissioners; Crawford & Shanklin, Lexington, Ky., are engineers. (See "Machinery Wanted.")

Ky., Winchester.—City awarded contract to Central Construction Co., Lexington, Ky., at \$6340 to construct sewage clarification tank and sludge drying bed; H. H. Hughes, Mayor; Charles E. Collins, consulting engineer, Philadelphia, Pa. (Call for bids lately noted.)

La., Lake Charles.—Lake Charles Sewerage Board will invite bids for construction of proposed sewerage system to cost about \$160,000.

La., New Orleans.—Sewerage and Water Board, P. S. Shields, secretary, receives bids until noon September 11 for construction of Napoleon Ave. system of drainage canals and pipe lines; recently mentioned. (See "Machinery Wanted.")

La., Shreveport.—City will engage engineer to estimate cost of constructing sewer system. Address The Mayor.

La., Opelousas.—City will vote August 24 on \$40,000 bond issue for construction of sewer system; E. B. Dubuisson, president Sewerage Commissioners.

La., Shreveport.—City awarded contract to R. N. McKellar, Shreveport, to construct 3000 linear feet of six-foot concrete sewer at \$7.10 per cubic yard; George R. Wilson, City Engineer. (Recently noted to open bids July 11.)

Md., Baltimore.—Board of Awards, City Hall, receives proposals until July 26 for constructing sanitary lateral sewers; also for installing discharge piping and valves in sewage pumping station; plans on file in office of Calvin W. Hendrick, chief engineer of Sewerage Commission, in American Bldg. (See "Machinery Wanted.")

Md., Frostburg.—City awarded contract to Upshur D. Rich of Frostburg to construct sewers on Water St., Frost Ave., Emerick's Al. and Wood St.

Miss., Lexington.—City will issue \$21,000 of bonds for construction of sewer system comprising six miles 12 to 16-inch pipe sewers; plans by Walter G. Kirkpatrick, Jackson, Miss. (Recently mentioned.)

N. C., Chapel Hill.—City will construct about three miles of pipe sewer 8 to 16 inches in diameter; bids received until July 25; S. L. Herndon, chairman committee; Gilbert C. White, engineer, Durham, N. C. (See "Machinery Wanted.")

N. C., High Point.—City awarded contract to J. B. McCrary Company, Atlanta, Ga., to extend sewer and water systems; cost about \$50,000; plans by J. A. Johnson; Fred N. Tate, Mayor. (Recently mentioned.)

N. C., Thomasville.—City awarded contract to J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for extension to sewer system and water-works; cost \$30,000. (Previously noted.)

N. C., Winston-Salem.—City will vote August 8 on \$85,000 bond issue for sewer construction. Address The Mayor. (Recently mentioned.)

S. C., Clinton.—City will construct nine miles of sanitary pipe sewers 8 to 12 inches in diameter and two settling tanks; bids received until August 21; J. B. McCrary Company, engineers, 1311-1315 Empire Bldg., Atlanta, Ga.; W. M. McMillan, chairman Sewerage Commission. (See "Machinery Wanted.")

Tenn., Jackson.—City contemplates construction of sewer system in North Jackson; Atwell Thompson, City Engineer, estimates cost at \$20,000.

Tex., Lubbock.—City, F. E. Wheelock, Mayor, will install recently-noted sewerage plant; cost \$55,000; disposal plant, septic tanks; L. W. Dalton, engineer, Dallas, Tex.; open construction bids August 14. (See "Machinery Wanted.")

Va., Norton.—City has \$20,000 available for completion of sewer system; construct 6½ miles, ranging from 6 to 18 inches; bids opened July 24; plans and specifications by Wingate & McGhee, Roanoke, Va.; Scarborough & Dotson, Norton, engineers in charge; John Roberts, Mayor. (See "Machinery Wanted.")

Va., Norton.—City is preparing to issue \$20,000 bonds to construct sewer system; John Roberts, Mayor.

W. Va., Huntington.—City will lay 12 and 15-inch vitrified tile sewer in various alleys and 12 and 18-inch vitrified tile sewer in Railroad Ave.; bids received until August 7; John Coon, Commissioner of Streets. (See "Machinery Wanted.")

TELEPHONE SYSTEMS

Ark., Spring Hill, R. F. D. from Hope.—Citizens' Telephone Co. incorporated with \$10,000 capital stock; Cliff Rogers, president; W. A. Maxwell, vice-president; C. C. Hayes, secretary; Fred Weindie, treasurer; Andy Gebhele, manager; main offices at Barling, Ark.

Ga., Dublin.—Carey-Stephensville Telephone Co. organized with \$12,000 capital stock by W. F. Collet and others; will construct telephone system through Laurens, Wilkinson, Twiggs and Pulaski counties.

Ga., Dublin.—Carey-Stephensville Telephone Line incorporated with \$12,000 capital stock by W. F. Colley and others to construct system through Laurens, Wilkinson, Twiggs and Pulaski counties.

Md., Baltimore.—Chesapeake & Potomac Telephone Co., 5 Light St., appropriated \$26,000 for replacement work and construction in trunk lines; will expend \$11,000 for conduit and underground cable work; expend \$4000 to erect aerial cable on York Rd.

N. C., Charlotte.—Western Union Telegraph Co., J. E. Hammersley, manager, will remodel building at cost of about \$10,000.

S. C., Cheraw.—Cheraw Telephone Co. will improve telephone system at cost of \$5400.

Tex., Palacios.—Coast Telephone Co. Incor-

ported with \$35,000 capital stock by T. J. Hardesty, T. J. Poole and H. W. Dean.

Tex., Waco.—Home Telephone Co. changed name to Brazos Valley Telephone Co. and increased capital stock from \$100,000 to \$200,000.

TEXTILE MILLS

Md., Franklinton.—Ramie Products.—American Ramie Co., New Hartford, Conn., refers inquirers to E. A. Brinckerhoff, Jr., Box 1057, New York, for information as to recent report company will establish mill.

Md., Frostburg.—Silk.—Board of Trade is interested in plan to establish silk mill.

Md., Hagerstown.—Knit Underwear.—Geo. A. Zook will build mill for knitting underwear; construction begun.

Md., Lonaconing.—Silk.—Klots Throwing Co. will install nine additional machines and cooling system; contracts awarded.

N. C., Albemarle.—Cotton Yarns.—Wiseasett Mills awarded contract to T. C. Thompson Bros. of Charlotte, N. C., and Birmingham, Ala., for erection of two-story brick mill construction addition to picker building.

N. C., Brevard.—Cotton Yarns.—Cleveland & Williams of Greenville, S. C., purchased Transylvania Cotton Mill Co. at \$22,500; will reorganize company and enlarge mill, probably installing looms; present equipment, 4000 ring spindles, 2000 twister spindles, etc.

N. C., Concord.—Cotton Goods.—W. M. Smith, David Cannon, John Odell and others will organize company with authorized capital stock of \$200,000 to build mill.

N. C., Thomasville.—Cotton Yarns.—Amazon Cotton Mills will increase from 6000 to 12,000 spindles; building and machinery contracts awarded, as lately stated; addition to be 110x107 feet, one story, brick mill construction; contractors, T. C. Thompson & Bros. of Charlotte, N. C., and Birmingham, Ala.

Tenn., Knoxville.—Cotton Yarn.—Knoxville Spinning Co. organized by L. D. Tyson, president of Knoxville Cotton Mill Co., is installing spindles, etc., in 60x150-foot building; all machinery purchased.

Tenn., Rockwood.—Hosiery.—Rockwood Mills will add new knitting machines; also appropriated \$10,000 to erect box factory.

WATER-POWER DEVELOPMENTS

Ala., Birmingham.—Birmingham Water, Light & Power Co., T. H. Friel of North Birmingham, president, plans to erect six turbine-driven generators at proposed Government lock (in two sections) on Warrior River to generate electricity for transmission to Birmingham, Bessemer, Ensley and other cities in Birmingham district.

Ga., Columbus.—Columbus Electric Co. (engineer, Stone & Webster Engineering Corporation, 147 Milk St., Boston, Mass.) plans improvements as follows: "Carry present impounding dam at Goat Rock, 15 miles above Columbus, on Chattahoochee River, to height which will provide head of 70 feet, constructing power-house and installing at outset one 3000 K. W. unit with switchboards, transformers and lines necessary to the new plant in with existing distributing system; to extend lines north to West Point, La Grange and Newnan; proceeds of \$1,000,000 notes to be applied to making extensions and improvements proposed; require from 9 to 12 months to install 3000 K. W. unit; possible ultimately to develop at Goat Rock about 15,000 H. P. each of primary and secondary power."

Tex., Austin.—Dam.—Wm. D. Johnson of New London, Conn., recently named as contractor for dam, wires Manufacturers Record as follows: "Dam about 500 feet long, 65 feet high; hollow reinforced concrete; Hydraulic Properties Co., 60 Broadway, New York, designing engineer; further particulars not ready." A. P. Woodbridge, Mayor of Austin, wires Manufacturers Record as follows: "Reinforced concrete diagonal cross buttress walls sustaining sloping deck; 7200-horse-power hydro-electric equipment; 10,000,000-gallon reservoir; price \$100,000 and \$64,800 annually for 25 years; Frank S. Taylor of Hydraulic Properties Co., engineer, at Austin."

Tex., New Braunfels.—Dam.—City voted \$67,000 bond issue for construction of dam across Guadalupe River; to develop 475 horse-power; plans by W. K. Palmer Company, Kansas City, Mo. (Recently mentioned.)

Virginia.—Appalachian Power Co., Vicksburg & Buck, engineers, 49 Wall St., New York, has begun construction of two water-power-electrical plants on New River to develop 23,000 horse-power; ordered materials for transmission lines and will soon begin their construction; other plants planned will give total of 75,000 horse-power; now operating Bluefield (W. Va.), Pulaski (Va.)

and other public-utility plants lately purchased and will greatly improve service; president, H. M. Byllesby of 125 Monroe St., Chicago, Ill.; has branch offices at Bluefield, W. Va., with Samuel Kahn as manager. (Organization, plan to invest \$6,500,000, etc., previously reported.)

W. Va., Morgantown.—Black River Water Power Co., authorized capital \$25,000, incorporated by Charles W. Held, Glenn Hunter, Frank P. Weaver, John M. Gleason and Willa L. Hyatt.

WATER-WORKS

Ala., Anniston.—City will extend water mains to Ward 5. Address The Mayor.

Ala., Fayette.—City will vote July 24 on bond issue for water-works. Address The Mayor.

Ala., Headland.—City awarded contract to J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for improvements to water-works and electric-light plant; cost \$7500.

Ala., Troy.—City will drill additional artesian wells. Address The Mayor.

Ala., Stevenson.—Establishment of water-works contemplated; probably by private capital or stock company; J. K. Shofner, Mayor.

Ark., Eldorado.—Eldorado Light & Power Co. will extend water mains; franchise granted. (See "Electric-light and Power.")

Ga., Colquitt.—City awarded contract to J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for improvements to water-works and electric-light plant previously noted. (See "Electric Light and Power Plants.")

Ga., Darien.—City contemplates construction of water-works. Address The Mayor.

Ga., Flowery Branch.—City is having plans prepared by J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for construction of water-works. (Bond issue previously noted.)

Ga., Maysville.—City is having plans prepared by J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for construction of water-works.

Ga., Macon.—City awarded contract for laying water and sewer mains in South Macon and North Highlands; cost \$35,000; contract for North Highlands' water main awarded to J. B. McCrary Company, Atlanta, Ga., at \$14,085.76. (Lately noted.)

Ga., Washington.—City voted \$30,000 bond issue for installation of filter and reconstruction of electric-light plant; E. A. Barnett, Mayor. (See "Electric Light and Power Plants.")

Ga., Zebulon.—City is having plans prepared by J. B. McCrary Co., 1311 Empire Bldg., Atlanta, Ga., for construction of water-works.

La., Shreveport.—City will engage engineer to estimate cost of constructing municipal water-works, cost of maintenance and necessary extensions, and value of present company's property with view to using portion of it. Address The Mayor.

Miss., Biloxi.—City is ready to issue \$70,000 of water-works bonds recently voted; to install pump for artesian well; gas and electric and steam power; 4, 6 and 8-inch mains; I. Heidenheim, chairman of Finance Committee. (See "Machinery Wanted.")

Miss., Friars Point.—City receives bids up to 12 noon July 27 for material and boring of artesian well; F. G. Proutt, consulting engineer, 374 Randolph Bldg., Memphis, Tenn.; city recently noted to construct water-works at cost of about \$12,000. (See "Machinery Wanted.")

Miss., Lexington.—City will issue \$41,500 of bonds for construction of water-works, comprising six miles cast-iron mains, two flowing artesian wells, steam or gasoline pumps, receiving basin and steel standpipe; plans by Walter G. Kirkpatrick, Jackson, Miss. (Recently mentioned.)

Mo., Greenfield.—City voted bond issue for construction of water-works; supply from deep wells. Address The Mayor.

Mo., Kansas City.—Board of Public Works awarded contract at \$54,950 for installation of two turbine pumps at Chain of Rocks pumping station, which will enable city to increase water supply 40,000,000 gallons daily; also awarded contract at \$250 for intake tower gate.

Mo., Kansas City.—County Court authorized Burns & McDonnell, engineers, Dwight Bldg., Kansas City, to make preliminary survey with view of obtaining permanent water supply; cost probably \$25,000.

N. C., Ashboro.—City awarded contract to J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for improvements to water-works and electric-light plant; cost \$10,000.

N. C., High Point.—City awarded contract to J. B. McCrary Company, Atlanta, Ga., for extension of water and sewer system; cost about \$50,000; plans by J. A. Johnson; Fred N. Tate, Mayor. (Recently mentioned.)

N. C., Thomasville.—City awarded contract to J. B. McCrary Company, 1311 Empire Bldg., Atlanta, Ga., for extension to water-works and sewer systems; cost \$30,000. (Previously noted.)

N. C., Winston-Salem.—City will vote August 8 on \$40,000 bond issue for improvement of water-works. Address The Mayor. (Recently mentioned.)

Okla., Custer.—City awarded contract to construct water-works and electric-light plant to Kennedy & Fleming, State National Bank Bldg., Oklahoma City, Okla. (See "Electric Light and Power Plants.") (Lately mentioned.)

Okla., Enid.—City will make improvements to water-works at cost of \$8000; 1,000,000 gallons capacity; construct 400 feet of tunnel bricked with 18-inch suction pipe; also 16 weirs; bids opened July 19; C. L. Burbank, City Engineer; Peter Bowers, Mayor. (Recently noted. See "Machinery Wanted.")

Okla., Hobart.—City will vote on \$20,000 bond issue for extension of water-works. Address The Mayor.

Okla., Indianola.—City will vote August 4 on \$12,000 water-works bond issue. Address The Mayor.

Okla., Willow.—Willow Water Works Co. incorporated with \$5000 capital stock by W. O. Dodson, C. C. Holden, H. C. Webb and L. G. Cousins of Willow and Zack T. Pryse of Mangum, Okla.

Okla., Wellston.—City voted issuance of \$30,000 water bonds. Address The Mayor.

S. C., Aiken.—City will lay 6 1/4 miles of 14-inch cast-iron water pipe; bids received until July 31; Harry Sudlow, engineer, Aiken. (See "Machinery Wanted.")

S. C., Columbia.—City will lay 4350 feet of 6 and 12-inch water main; bids received until July 21; F. C. Wyse, engineer-superintendent. (See "Machinery Wanted.")

Tex., Abilene.—Board of Commissioners called election for August 17 to vote on issuance of \$20,000 bonds to purchase site for new water supply; new lake will cover 400 or 500 acres; W. O. Shackelford, Commissioner.

Tex., Brownsville.—City will make extension to water-works; bids received until August 1 for pipe; E. L. Burks, superintendent water and light plant; C. H. More, chairman of committee. (See "Machinery Wanted.")

Tex., Fort Worth.—City will construct impounding and storage reservoir on West Fork of Trinity River, about six miles from city; dam will require 300,000 cubic yards wetted and rolled embankment of 60,000 cubic yards cyclopan concrete; also construct reinforced concrete gravity conduit 40 inches internal diameter, about 6 1/2 miles long, from reservoir to pumping station; W. D. Davis, Mayor; J. D. Trammell, John B. Hawley and T. U. Taylor, Board of Engineers. (See "Machinery Wanted.")

Tex., Lubbock.—City will install proposed water-works plant to cost \$25,000; capacity 30,000 gallons; erect brick engine and pump house; gasoline-power pump; concrete ground reservoir; steel tank and 100-foot steel tower; engineer, L. W. Dalton, Dallas, Tex.; bids opened August 14. (See "Machinery Wanted.")

Tex., Menard.—E. C. Clark, Chicago, Ill., contemplates construction of water-works.

Va., Dublin.—City has engaged G. H. Derick, civil engineer, Pulaski, Va., to make surveys, prepare plans and estimate cost of constructing water-works; reported cost is about \$10,000.

Va., Norfolk.—John H. Trant, Jr., Law Bldg., is estimating on furnishing water supply for city; tentative plans contemplate construction of pumping station, erection of standpipe, laying of mains, installation of two large electrical pumps, 48-inch pipe line, etc. (See "Machinery Wanted.")

WOODWORKING PLANTS

Ala., Calera.—Coperage.—Alabama Coperage Co. will erect brick kilns to replace burned structures; cost about \$5000.

Ala., Jacksonville.—Heading.—Louis Carson will establish heading mill; leased timber land.

D. C., Washington.—Office Fixtures, etc.—W. O. Gottwals Company incorporated with \$25,000 capital stock by Thomas H. Melton, 1315 H St. N. W., and Frederick B. Rhodes, 616-618 Bond Bldg., both of Washington, and W. O. Gottwals, Greensboro, N. C.

N. C., Paintgap.—Shuttles.—Charles M. Ray and George M. Core, Charlotte, N. C., will

manufacture shuttles; purchased several boundaries of timber in Yancey county.

Okla., Sawyer.—Furniture.—Sawyer Furniture & Casket Manufacturing Co., W. D. Clarke, president, 415 Colcord Bldg., Oklahoma City, Okla., will erect fireproof building and manufacture furniture. (Recently reported incorporated with \$100,000 capital stock.)

Tenn., Rockwood.—Boxes.—Rockwood Mills appropriated \$10,000 to build box factory.

Tex., El Paso.—Doors, Sash, etc.—Madera Land & Lumber Co., Dr. F. S. Pearson, president, 29 Exchange Pl., New York, is reported as to build \$500,000 plant to manufacture doors, sash, boxes and interior finish. Dr. Pearson's office wires Manufacturers Record: "Unable to supply information prior to Pearson's return next week." (See "Miscellaneous Factories.")

Tex., San Marcos.—Crates.—H. Woodall, Box 130, contemplates erection of plant to manufacture vegetable crates. (See "Machinery Wanted.")

BURNED

Ala., Newville.—Union Mercantile Co.'s store, L. W. and C. V. Capps' store; loss about \$25,000.

Fla., Tallahassee.—Tallahassee Grocery Co.'s store; loss \$20,000.

Ga., Douglas.—Douglas Hotel building, owned by J. C. Brewer, Daniel Haskins and Elias Lott; loss \$5000.

Ga., Dublin.—Chautauqua Association's auditorium.

Ky., Bardwell.—Ed. D. Riggs' residence, J. Buga's residence; loss \$7000.

Ky., Louisville.—Willard Hotel; loss \$30,000.

Ky., Barlow.—J. S. Dale's residence; loss \$4000.

Ky., Delaplain.—J. H. Giles' store.

Ky., Williamsburg.—East Tennessee Telephone Exchange; E. G. Massingill's residence; Cumberland Bakery; Williams Bros' store; J. L. Whitehead's store.

Ky., Williamsburg.—East Tennessee Telephone Co.'s exchange; John French's store; J. L. Whitehead's store, etc.; loss \$50,000 to \$75,000.

La., Monroe.—Mauser Brothers' four dwellings; loss \$3000.

La., Opelousa.—Felix Richards' residence.

Mo., Pittsburg.—A. B. Kirkwood's building.

N. C., Jonesboro.—E. P. Snipes' store building; loss \$3000.

N. C., North Harlowe.—J. S. Morton's residence; Mrs. Edward Bangert's store and stable.

N. C., Salisbury.—Miss Elizabeth Hedrick's building; loss \$5000.

Okla., Addington.—Methodist church. Address The Pastor, Methodist Church.

Okla., Coweta.—E. D. Peden's elevator; loss \$3500; Gwin & Griffith's flour mill; loss \$4500.

Okla., Ida.—W. A. Vaughn's cotton mill; loss \$5000.

Okla., Prague.—Union Cotton Oil Co.'s warehouse.

Okla., Tulsa.—Tulsa Furniture Co.'s factory. Colonial Hotel damaged; loss about \$25,000.

S. C., Lancaster.—Bank of Lancaster.

Tenn., Nashville.—W. W. Morehead Grain Co.'s building at 118 Third Ave.; loss \$6000.

Tenn., South Pittsburg.—South Pittsburg Electric Light & Power Co.'s electric-light plant; estimated loss \$6000; building and Corliss engine owned by United States Cast Iron Pipe & Foundry Co. of Chattanooga, Tenn.; estimated loss \$8000.

Tex., Dallas.—Tampa Bay Restaurant, owned by George Harris; loss about \$6000.

Tex., Greenville.—Two buildings owned by Mrs. N. D. Teague of Dallas, Tex.; loss \$5500.

Tex., Greenville.—Schiff Bldg., occupied by Alexander Shoe Co., R. N. White and others. W. Va., Chester.—Fred Werkheiser's store; loss \$5000.

Tex., Marlin.—J. D. Riley's electric gin plant; estimated loss, \$4000.

Tex., Paris.—Square Deal Market; B. E. Welkel's store; loss \$10,000.

Tex., San Antonio.—Albert V. Huth's residence; loss \$10,000.

Va., Grottoes.—Eutsler Bros' plant; loss about \$25,000.

Electrical Equipment.

The order for electrical equipment, including lights, telephones and standards for lights in front of the building for the Jones & Bailey Hotel at Raleigh, N. C., has been given to the Carolina Electrical Co. of that city to the value of \$1350.

BUILDING NEWS

BUILDINGS PROPOSED

APARTMENT-HOUSES

Ky., Henderson.—Realty Improvement Co. will erect apartment-house; 60 rooms; three stories.

Ky., Louisville.—John R. Ghens will erect two apartment-houses; three stories; brick; cost \$15,000 each.

Mo., Pittsburg.—A. B. Kirkwood will erect store, office and apartment building. (See "Stores.")

Mo., Kansas City.—P. H. Strange will erect apartment-house and store at 346 N. Hardisty St.; cost \$4800.

Mo., St. Louis.—O'Neill Ryan will erect Thurler building at Delmar and Hamilton Sts.; cost \$50,000. (See "Stores.")

Mo., St. Louis.—Trade Realty & Building Co. will erect apartment-house; three stories; cost \$15,000.

Tenn., Nashville.—W. M. Dismukes will erect apartment-house; three stories; brick; cost \$7500.

Va., Richmond.—Mrs. A. R. Lawrence will erect tenement-house and two stories; brick.

ASSOCIATION AND FRATERNAL

Ark., Argenta.—Big Rock Lodge, Ancient Free and Accepted Masons, will erect lodge hall; cost about \$4000; 100x32 feet; hardwood interior finish; G. S. Scott, John B. Ray and B. Holcomb, building committee.

Ark., Little Rock.—Willow Grove Circle No. 8 and Baring Cross Camp No. 56, Woodmen of the World, will erect lodge building.

Fla., Pensacola.—B. P. O. Elks have plans for erection of clubhouse on W. Garden St.; three stories; pressed brick; 40x136 feet.

Ga., Augusta.—L. A. Bellonby is preparing plans for Colored Odd Fellows' hall and business block; two stories; 40x75 feet; frame; estimated cost \$5000.

Okla., Tulsa.—Order of Mystic Shrine, Ancient Free and Accepted Masons, plans to erect temple to cost about \$100,000.

Tenn., Lebanon.—Lotus Lodge No. 29, Knights of Pythias, will erect \$7000 clubhouse; pressed brick and stone; two stories and basement; kitchen and shower baths in basement; M. A. Goldston, chairman of building committee.

Tenn., New Providence.—Building Committee of Independent Order of Odd Fellows' Home rejected all bids to erect home and will readvertise for new bids to come within appropriation of \$20,000.

Tex., El Paso.—Scottish Rite Benevolent Association will erect Temple; cost about \$120,000.

BANK AND OFFICE

Ark., Arkadelphia.—Elk Horn Bank & Trust Co. has site corner Main and 6th Sts. and will erect bank.

Ark., Jonesboro.—H. A. Lemeister, contractor, states that recently-noted building for Bank of Jonesboro will be erected at cost of \$45,000; three stories; 30x90 feet; plans by Shaw & Pfeil, Memphis, Tenn.

Ga., Hinesville.—Hinesville Bank, J. R. Ryan, president, will erect brick building.

Ga., Norcross.—Gwinnett County Bank will erect bank building.

Ga., Rome.—Seaborn Wright and Barry Wright will remodel building at 4th and Broad Sts. for offices.

Ky., Louisville.—Inter-Southern Life Insurance Co., James R. Duffin, president, will award contract in about 30 days to erect proposed office building corner 5th and Jefferson Sts.; 18 stories; cost \$300,000; plans by Brinton B. Davis, Louisville. (Recently noted.)

La., Bunkie.—Merchants and Planters' Bank will erect bank building.

La., Colfax.—Bank of Colfax will open bids July 23 to erect bank and office building recently reported burned; 55x60 feet; gray press brick; cost \$7500; plans by J. Carver, Colfax. (See "Machinery Wanted.")

La., New Orleans.—German-American National Bank, 620 Canal St., will expend \$10,000 for alterations and repairs to bank building.

Md., Centerville.—Queen Anne's National Bank is having plans prepared by William Draper Brinckle, Wilmington, Del., for tower and other improvements to bank building; brick and stone; Indiana limestone trimmings; bids will be received until July 21.

Mo., Pittsburg.—A. B. Kirkwood will erect store, office and apartment building. (See "Stores.")

Okla., Oklahoma City.—W. F. Harn will erect office building; three stories and basement, with carrying capacity of 14 additional stories; 50x140 feet; later to occupy 170x140 feet; fireproof construction; cost \$40,000 to \$50,000; architect not selected.

Tex., Goldsboro.—South Texas Mortgage Co., 210-12 Main St., Houston, Tex., will erect 25x50-foot office building of ordinary construction; plans by O. H. P. Ruddell, Houston, Tex.

Tex., Houston.—Galveston-Houston Electric Co. will erect office and car-shed building. (See "Miscellaneous Structures.")

Tex., Pattonville.—First State Bank, S. A. McCulliston, president, will erect 25x60-foot fireproof building; plans and construction by Mr. Powers. (See "Machinery Wanted.")

Tex., Post.—C. W. Post will erect office building; two stories; Spanish style.

Tex., Slaton.—Paul Bank will erect bank building; two stories; brick; construction begun.

Va., Bowling Green.—Caroline County Bank will receive bids until August 1 to erect bank building; brick and stone; 35x49 feet; one story and mezzanine; terra-cotta trimmings; composition roof; terrazzo floors; concrete vault; fire shutters; galvanized-iron cornice; yellow pine trimmings; patent plaster; metal ceiling; electric lighting; granolithic sidewalks; cost \$8000; plans and specifications by Anderson, Cain & Shepherd, Richmond, Va.

W. Va., Martinsburg.—W. H. Heiston & Co. will erect addition to office building; two stories; brick; 18x25 feet.

CHURCHES

Ala., Mobile.—Congregation Abnays Chosed will erect temple; M. Gup, I. Schwarz and J. W. Olensky, building committee.

Ark., Fort Smith.—Mrs. W. J. Echols will erect chapel; to be under supervision of First Christian Church; cost about \$12,000.

Ark., Malvern.—Presbyterian Church, Rev. W. T. Sullivan, pastor, contemplates rebuilding edifice; brick; furnace heat; electric lighting; art-glass windows. (Recently noted burned.)

Ark., Prescott.—Presbyterian Church will erect edifice; cost about \$8000; plans in progress. Address The Pastor, Presbyterian Church.

Ark., Prescott.—Presbyterian Church has plans by Mr. Thompson of Little Rock, Ark., for edifice recently mentioned; 40x75 feet; cost within \$10,000; date of awarding contract not set. Address Thos. C. McRea.

Ga., Fitzgerald.—First Baptist Church will have plans prepared by Sayre & Baldwin, Anderson, S. C., for \$30,000 edifice; about 65x110 feet; Rev. T. M. Calloway, chairman building committee.

Ga., Moultrie.—Presbyterian congregation will erect edifice; cost about \$25,000. Address The Pastor, Presbyterian Church.

Md., Baltimore.—St. Andrews Church awarded contract to J. O. Evans & Bros., 2302 E. Federal St., Baltimore, to erect edifice; 29x73 feet; ordinary construction; steam heat; electric lighting; cement sidewalks; cost \$12,000; plans by H. H. McComas, 2132 E. Biddle St., Baltimore.

Md., Hagerstown.—Grace United Brethren Church, Rev. G. I. Rider, pastor, will erect edifice; cost \$25,000.

Md., Williamsport.—Zion Lutheran congregation will erect edifice; buff brick; 112x50 feet; cost \$15,000. Address The Pastor, Zion Lutheran Church. (Previously noted.)

N. C., Charlotte.—Dilworth Methodist Church will erect edifice. Address The Pastor, Dilworth Methodist Church.

N. C., Concord.—St. James' Lutheran Church plans to expend about \$9000 for improvements to edifice. Address The Pastor, St. James' Lutheran Church.

N. C., Fayetteville.—Haymount Presbyterian Church organized; J. C. McDiarmid and S. M. Reed, elders; will erect edifice.

N. C., Winston-Salem.—Baptist congregation plans to erect edifice in East Winston; Mrs. L. A. Wade, Mrs. E. T. Cole and others are interested.

S. C., Greer.—M. E. Church will open bids about August 15 on edifice to cost \$15,000; about 55x100 feet; art glass to be used; J. D.

Wood, chairman building committee; plans by Sayre & Baldwin, Anderson, S. C.

S. C., Honea Path.—First Baptist Church will enlarge edifice. Address The Pastor, First Baptist Church.

S. C., Tatum.—Methodist congregation will erect \$15,000 edifice. Address The Pastor, Methodist Church.

Tenn., Jackson.—First Presbyterian Church, Rev. Albert Sidney Johnson, pastor, will erect edifice to cost not less than \$50,000; W. P. Robertson, S. J. Everett, J. W. Vanden and others, building committee. (Recently noted.)

Tex., Dallas.—St. Paul M. E. Church has not let contract for proposed edifice; plans by H. N. Black, Portland, Ore.; ordinary construction; 50x100 feet; cost \$30,000; steam heat; bids opened June 5.

Tex., Eagle Lake.—Baptist congregation will erect brick edifice. Address The Pastor.

Tex., Rosenberg.—Bids have been opened for erection of brick church building; plans by R. D. Steele, Houston, Tex.

Va., Altavista.—Methodist congregation will erect edifice to cost \$6000. Address The Pastor, Methodist Church.

Va., Harrisonburg.—Methodist congregation, Rev. H. H. Sherman, pastor, will erect edifice; cost \$60,000; construction begun.

CITY AND COUNTY

Ga., Atlanta.—Municipal Building.—City will expend \$3450 for improvements to buildings at 130, 176, 180 and 184 W. Mitchell St. Address The Mayor.

Ga., Augusta.—Stables.—City is having plans prepared by Nisbet Wingfield, Commissioner of Public Works, for proposed city stables.

Ga., Augusta.—Hospital.—City is having plans prepared by Meyer J. Sturm, 704 No. 84 LaSalle St., Chicago, Ill., for hospital for negroes, \$125,000 city hospital and medical college building, consisting of remodeling present orphanage asylum building; G. Lloyd Preacher, associate architect, Augusta.

Ga., Macon.—City Hall.—City will improve city hall, erect barrack in rear; cost of improvements \$5000. Address The Mayor.

La., New Orleans.—Engine-house.—Charles R. Kennedy, Comptroller, will receive bids until 11 A. M. July 24 to erect two-story stucco engine-house at Alexander and Iberville Sts.; deposit of \$300 with bids; plans, specifications and blank forms of proposals on file with City Engineer.

La., New Orleans.—Engine House.—City Comptroller Kennedy will receive bids until 11 o'clock July 24 to erect engine-house at Alexander and Iberville Sts.; two stories; plans by City Architect E. A. Christy.

Md., Baltimore.—Stables.—Board of Awards, James L. Preston, president, rejected all bids to erect stable on Greenmount Ave. near North Ave. for Street-Cleaning Department; will have plans revised and invite new bids. (Recently noted.)

Miss., Meridian.—Stables.—City Board, C. W. O'Leary, clerk, will receive bids until July 21 to erect city stables near Fire Station No. 4; plans and specifications at office of I. F. Ethridge, Building Inspector.

Miss., Meridian.—City Hall and City Stables.—City plans to erect city hall and city stables. Address The Mayor.

Miss., Clarksdale.—Office Building.—Yazoo-Mississippi Delta Levee Board, J. W. Cutrer, president, and A. L. Dabney, engineer, will receive bids until noon July 27 to erect two-story fireproof office building on Delta Ave. between 1st and 2d Sts.; certified check for \$2000; plans and specifications at office of board at Clarksdale or of Shaw & Pfeil, architects, 1533 Tennessee Trust Bldg., Memphis, Tenn.

N. C., Newton.—Jail.—Catawba County Commissioners are reported to install water and sewerage connections in jail, larger vaults in courthouse and provide room for petit jury.

Okla., Hobart.—City Hall.—City will vote on \$50,000 bond issue to erect city hall building and auditorium to seat 2000.

Tex., Fort Worth.—Bathhouse and Greenhouses.—Park Board, George Vinnedge, Park Superintendent, will erect bathhouse over Sycamore Creek and two greenhouses 24x40 feet in Sycamore Park.

Tex., Pecos.—Library.—City will erect Carnegie Library; cost \$10,000. Address The Mayor.

Va., Harrisonburg.—Library.—City plans to erect \$10,000 Carnegie Library. Address The Mayor.

Va., Norton.—City is preparing to issue \$15,000 bonds to erect city hall. John Roberts, Mayor.

COURTHOUSES

W. Va., Warwood.—City Hall.—City plans to erect city hall; H. E. Boyd, chairman of finance committee.

Ga., Atlanta.—Commissioners of Road and Revenue of Fulton county, H. E. W. Palmer, chairman, will receive bids on special blank form supplied by architect until noon August 19 for material and labor for following work: The fireproofing of all interior structural steel columns, beams, floor arches, for courthouse 130x220 feet; nine stories, basement and sub-basement; cost about \$750,000; structural steel work consisting of columns, girders, beams, bases, etc.; reinforced concrete frame work consisting of columns, girders, beams, floor slabs and tile caps; concrete tiling in various acceptable methods to receive tiling caps, columns, etc.; waterproofing in basement and sub-basement of floors, walls, etc.; certified checks for 2 per cent. of bid with each proposal; work divided into five contracts, as follows: Waterproofing, reinforced concrete frame, piling, tile fireproofing, structural steel. Plans and specifications at office of associate architects, A. Ten Eyck Brown and Morgan & Dillon, 607-10 Forsyth Bldg., Atlanta, and at office of commission; or may be had on deposit of certified check for \$30 for each set. (Previously noted. See "Machinery Wanted.")

Ky., Harrodsburg.—Mercer county will erect courthouse to replace present structure. Address County Commissioners.

Ky., Paducah.—Fiscal Court of Calloway County submitted proposition to vote on \$40,000 bond issue. Address County Commissioners.

Ky., Paducah.—Calloway county is considering election to vote on \$40,000 bond issue to erect courthouse. Address County Commissioners.

N. C., Newton.—Catawba County Commissioners will, it is reported, improve courthouse and jail. (See "City and County.")

Tex., Nacogdoches.—Commissioners' Court accepted plans by Lang & Witchell, 622 Wilson Bldg., Dallas, Tex., to erect courthouse; cost \$65,000.

Tex., Van Horn.—Culberson county will vote on \$75,000 bond issue to erect courthouse. Address County Commissioners.

DWELLINGS

Ala., Birmingham.—C. W. Mills will erect residence; two stories; frame; cost \$4500.

Ala., Birmingham.—Burr Blackburn will erect residence; two stories; brick veneer; cost \$3800.

Ala., Montgomery.—John Hannon will expend \$12,000 to \$14,000 to erect 11-room dwelling; tables, keelbox, etc., will be built in walls; hardwood floors; tile flooring in kitchen and bathroom; will engage foreman to supervise construction; will also erect four other dwellings; two stories each. (Recently noted.)

Ala., Gadsden.—Felix R. Allison awarded contract to W. H. Mayben, Gadsden, to erect residence; Colonial style; broad verandas; cost \$10,000.

D. C., Washington.—Isaac Kriksteine, 1250 F St. N. W., will erect store and dwelling. (See "Stores.")

D. C., Washington.—C. W. Williams, 639 Randolph St. N. W., has plans by L. T. Williams, 1239 F St. N. E., Washington, for three dwellings at 4129-43 New Hampshire Ave. N. W.; two stories; brick; cost \$5500; construction by owner.

Fla., Jacksonville.—John A. Cunningham will erect residence.

Fla., Jacksonville.—W. T. Clark will erect two-story frame dwelling.

Fla., Jacksonville.—A. B. Hoyt of Jackson-Hoyt Company will, it is reported, erect residence.

Fla., Jacksonville.—David Kowiska will erect dwelling; two stories; frame.

Fla., Jacksonville.—C. H. Oak will erect four dwellings; one story; frame.

Fla., Miami.—Dave Afremow will erect four dwellings; construction begun.

Fla., Miami.—R. G. Moore will erect residence.

Fla., Starke.—Presbyterian Church plans to erect manse. Address The Pastor, Presbyterian Church.

Ga., Albany.—M. W. Tift is having plans prepared by Frank R. Happ, Macon, for two-story and basement dwelling; cost \$6000.

Ga., Athens.—Max Michael has plans by Frank R. Happ, Macon, for dwelling; frame; cost \$3500.

Ga., Atlanta.—Sam Schoen will erect residence; cost \$5000; to contain 7 rooms;

frame; hot-air or vapor heat; plans by Hentz & Reed; construction by owner.

Ga., Atlanta.—G. L. Bush will erect three dwellings on Ponce De Leon Pl.; cost \$10,750.

Ga., Atlanta.—K. K. Kelley will erect two dwellings; cost \$5000.

Ga., Atlanta.—D. C. Smith will erect residence; cost \$3200.

Ga., Atlanta.—S. W. Sullivan will erect residence; cost \$3500.

Ga., Atlanta.—M. I. Hall will erect residence; cost \$3200.

Ga., Atlanta.—H. L. De Givie will erect residence; cost \$23,000.

Ga., Atlanta.—F. O. Hargis will erect residence; cost \$2800.

Ga., Atlanta.—Dillon-Morris Co. will erect residence; cost \$3000.

Ga., Augusta.—Mrs. Annie Wolfe has plans by L. A. Bellonby, Augusta, for two-story frame dwelling; cost \$4000.

Ga., Augusta.—H. P. Burum has plans by H. T. E. Wendell, Augusta, for two-story dwelling; stucco construction; seven rooms; hot-water heat.

Ga., Lexington.—Hamilton McWharton, Jr., has plans by Frank R. Happ, Macon, for dwelling; two stories; frame; cost \$6000.

Ga., Macon.—Mrs. S. Melchelsbaum has plans by Frank R. Happ, Macon, for two-story frame dwelling; cost \$4500.

Ga., Unidilla.—J. Bridges is receiving bids to erect dwelling; 10 rooms; metal roof; cost \$4500; plans by Curran R. Ellis, Macon, Ga.

Ga., Valdosta.—L. L. Dougherty has plans by Curran R. Ellis, Macon, Ga., for dwelling; metal roof; colonial columns; hardwood floors and mantels; cost \$5000.

Ky., Louisville.—Hewett Brown will erect dwelling; two stories; brick; cost \$12,000.

La., New Orleans.—Sidney Mitchell will erect dwelling at 19 Noron Pl.; cost \$4500.

La., New Orleans.—I. N. Englehardt will erect dwelling; two stories; cost \$3000.

La., New Orleans.—Miss Anne E. Crane will erect residence; cost \$3500.

La., New Orleans.—Frank Reith will erect double two-story dwelling on Berlin St.; cost \$3200.

La., New Orleans.—C. A. Stair will erect residence; frame and stucco; cost \$4000.

La., New Orleans.—J. K. Bailey will erect residence; two stories; frame; cost \$3500.

La., New Orleans.—N. Galssey will erect residence; two stories; cost \$3500.

La., New Orleans.—Mrs. Annie E. Crane will erect double residence; two stories; frame; cost \$3500.

La., New Orleans.—Mrs. M. Schneidau will erect residence; double; cost \$4000.

La., New Orleans.—Abraham Nelken will erect two-story residence; cost \$4000.

Md., Baltimore.—Euclid Building Co., 602 1st St., has plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore, for six dwellings on Elm Ave.; two and a half stories; frame; 25x28 feet; steam heat; electric lights; cost \$25,000.

Md., Baltimore.—Chas. E. Litzinger, 922 38th St., will erect 11 two-story 14x50-foot dwellings; cost \$20,000; brick; steam heat; gas and electric lighting; plans by F. E. Beal, 213 St. Paul St., Baltimore; construction by owner.

Md., Baltimore.—Edward J. Gallagher, 2612 Canton Ave., purchased site 301x50 feet at Lakewood Ave. and Fleet St. and will erect number of dwellings.

Md., Baltimore.—Frank Novak, 2808 Jefferson St., is having plans prepared by Joseph F. Hirt, 2808 Jefferson St., Baltimore, for 24 dwellings in 600 block Kenwood Ave.; two 14 feet 11 inches by 50 feet, and twenty-two 13 feet 1 inch by 47 feet; iron-spot brick; two stories.

Md., Baltimore.—Edward J. Streck, Falt and Lakewood Aves., will erect 18 dwellings on Lakewood Ave. and four on Hudson St.; two stories; iron-spot brick; gas lighting; hot-air heat; cost about \$17,000.

Md., Baltimore.—J. H. Helmes, president M. A. P. Publishing Co., 410 Union Trust Bldg., Baltimore, is reported as having plans prepared to erect residence at Hill Top Park.

Md., Chevy Chase.—Dr. Lucien Clarke, 1315 Euclid St. N. W., will erect residence.

Md., Roland Park.—Dr. T. C. Gilchrist, Professional Bldg., Baltimore, Md., is having plans prepared by Glidden & Friz, Glenn Bldg., Baltimore, for residence on St. John's Rd.; cost \$13,000; contractors estimating are J. Henry Smith, 1428 Light St.; Gladfelter & Chambers, Parkdale and Maryland Aves.;

Willard E. Harn Company, 213 N. Calvert St.; Milton C. Davis, 15 E. Fayette St., all of Baltimore, Md., and Roland Park Co., 408 Roland Ave., Roland Park. (Recently noted.)

Md., Round Bay (not a postoffice).—John A. Delves, The Walbert, Baltimore, Md., will, it is reported, erect residence on Severn River at Round Bay; one and one-half stories; electric lighting and hot-water heating.

Md., Govans.—Daniel Dwyer, 14 E. Lexington St., Baltimore, Md., is reported to erect nine dwellings; 15x45 feet; electric lights; hot-water heat; plans by Henry J. Tinley, 314 N. Charles St., Baltimore, Md.

Mo., Kansas City.—Pratt & Pratt will expend \$750 to erect residence; 24x31 feet; kitchen and sleeping porches extended; ordinary and mill construction; furnace; gas and electric lighting; cement sidewalks; day labor. (Recently noted.)

Mo., Kansas City.—E. S. Trullitt will erect dwelling at 4320 Oak St.; cost \$12,000.

Mo., Kansas City.—J. A. Simpson will erect two dwellings; frame; cost \$3000.

Mo., Kansas City.—W. L. Carr will erect residence; stone veneer; cost \$3500.

Mo., Kansas City.—J. L. Housekeeper, chief inspector of City Engineering Department, will erect residence.

Mo., Kansas City.—A. E. Blachert of Blachert & Kipp will erect residence; stone construction; cost \$12,000; construction begun.

Mo., Kansas City.—H. H. Embry will erect residence; frame; cost \$7500.

Mo., Kansas City.—Arthur B. Clark will erect dwelling; frame; cost \$3000.

Mo., Kansas City.—Arthur Seyster will erect residence.

Mo., Kansas City.—L. R. Briggs, Jr., will erect residence.

Mo., Kansas City.—C. G. Hubbell will erect dwelling; brick veneer; cost \$4000.

Mo., Kansas City.—Mrs. Roma J. Wornall will remodel residence and erect frame addition.

Mo., Kansas City.—V. A. Clifton will erect residence; frame; cost \$4000.

Mo., St. Louis.—Hart & Wind will erect four one-story dwellings; cost \$7200.

Mo., St. Louis.—Dr. J. W. McDonald has plans to erect dwelling in Hampton Park.

S. C., Greenville.—Z. T. Cody has plans by T. G. Rogers, Greenville, for residence; cost \$3000.

Tenn., Nashville.—Luke Gray will erect residence; nine rooms; brick; cost \$3200.

Tex., Dallas.—J. F. Cobb will erect residence; two stories; frame; cost \$3750.

Tex., Denton.—College of Industrial Arts has plans by Dennis Walsh, Austin, Tex., for president's residence; ordinary construction; hot-air heat. Address N. D. Bizzell, president.

Tex., El Paso.—Mrs. Ada Shelton will erect residence; cost \$6500.

Tex., Fort Worth.—Mrs. Emma Cobb has plans by Waller & Field, Fort Worth, for proposed \$10,000 brick residence; hardwood floors; flat asbestos roof; furnace; contract to be let July 26.

Tex., Goliad.—Joel Shaper will erect two-story residence.

Tex., Houston.—Mrs. M. A. Durkee will erect 16-room dwelling; cost \$3000.

Tex., Houston.—N. A. Hughes will erect six dwellings; cost \$7200.

Tex., Houston.—Edgewood Realty Co. will erect residence; seven rooms; cost \$3000.

Tex., Houston.—Fred Autry will erect dwelling; nine rooms; cost \$4250.

Tex., Houston.—Mrs. M. A. Durkee will erect three dwellings; two light rooms and one 16 rooms; cost \$6000.

Tex., Houston.—N. A. Hughes will erect six cottages; five rooms; cost \$7200.

Tex., Houston.—Russell Brown will erect four dwellings; cost \$3500.

Tex., Itasca.—Contract for D. K. Martin's residence (recently noted) will be let July 26; brick; asbestos flat roof; hardwood floors; cost \$10,000; architects, Waller & Field, Fort Worth, Tex.

Tex., Milano.—Joe Burnett will erect two-story dwelling.

Tex., San Antonio.—W. A. Baily purchased 14 lots on Alamosa Ave. and will erect number of two-story residences.

Va., Richmond.—W. T. Bryant will erect detached dwelling; two stories; brick; cost \$3750.

Va., Richmond.—T. O. Bailey will erect two detached dwellings; two stories; frame; cost \$4050.

W. Va., Wheeling.—Chester G. Whitham, Bethany Pike, will erect residence.

W. Va., Wheeling.—Sacred Heart Church, Rev. Father Rossman, pastor, has plans by Giesey & Faris, Wheeling, for proposed rectory; brick; eight rooms.

GOVERNMENT AND STATE

Ala., Eufaula.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., is reported as planning erection of postoffice building.

Fla., Pensacola.—Federal Building.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., is reported to remodel Federal building, including erection of 35-foot addition; cost about \$100,000.

Ky., Lakeland.—Hospital.—Kentucky State Board of Control for Charitable Institutions will receive bids at office of superintendent until noon August 7 for material and erection of tuberculosis hospital; certified check for 5 per cent. amount of bid; plans and specifications at office of superintendent of asylum at Lakeland and of D. X. Murphy & Bro., architects, Louisville, Ky.; Albert Scott, president.

Ky., Lebanon.—Sealed proposals will be received at office of James Knox Taylor, supervising architect, Washington, D. C., until 3 P. M. August 10, and then opened, for construction, complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring and interior lighting fixtures) of United States postoffice at Lebanon, in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Lebanon or at office of supervising architect, at his discretion.

Md., Sykesville.—Asylum.—Austin L. Crothers, Governor, Union Trust Bldg., Baltimore, Md., will receive bids until noon July 26 to erect hospital, men's group, and cottage F, women's group; plans and specifications at office of Parker, Thomas & Rice, architects, Union Trust Bldg., Baltimore, Md., or may be had on deposit of \$5.

Mo., Jefferson City.—State Capitol.—State will vote August 1 on \$3,500,000 bond issue to erect State capitol, plans for which will be procured by competitive architectural contest; W. W. Roberts of Monticello, Mo.; E. B. Clements, Macon, Mo.; J. R. Lowell, Boberly, Mo., and others, State Executive Committee. (Previously noted as probably to vote on this issue.)

N. C., Washington.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., opened bids for erection of postoffice; John G. Unkefer, Minerva, Ohio, is lowest bidder at \$29,585. (Previously noted.)

S. C., Charleston.—Immigration Station.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., opened bids to erect immigration station; Simons-Mayrant Company of Charleston is lowest bidder, and will probably receive contract; two stories; concrete framework; hollow tile walls; cement floors; hot-water heat; electric lights; has \$70,000; plans by Walker & Burden, Charleston. (Recently noted.)

Tex., Mineral Wells.—Postoffice.—Treasury Department, Office of Supervising Architect, James Knox Taylor, Washington, D. C. Sealed proposals received until 3 P. M. August 17, and then opened, for construction complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring and lighting fixtures) of United States postoffice at Mineral Wells in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Mineral Wells or at this office.

Tex., Paris.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., will erect postoffice building instead of annex, as previously planned; has \$100,000 appropriation.

HOTELS

Ark., Hot Springs.—New Waverly Hotel Co. will erect hotel and bathhouse; cost not less than \$150,000.

Fla., Daytona.—Ridgewood Hotel Co. will erect addition to Ridgewood Hotel; cost \$25,000.

Ga., Cedartown.—Mrs. Olga Hudgins purchased Right Hotel and will remodel.

Ga., Valdosta.—Devine & Fender has engaged W. T. Jay to superintend construction of Florence Hotel; six stories; 100 rooms; brick and stone; cost \$75,000; subcontracts will be let by superintendent for pressed-brick construction, marble work, tile roofing, heating, plumbing, electrical work, installation of telephone system, elevator and plas-

tering; plans by Curran R. Ellis, Macon, Ga. (Previously noted.)

Ky., Louisville.—Louisville Galt House Co., organized by Jacob Greenburg and others; purchased Galt House and will expend about \$70,000 for improvements, including installation of power plant and two elevators.

N. C., Winston-Salem.—Mrs. L. C. O'Brien leased Phillips' Flats, and will convert into hotel.

Okla., Braggs.—Elmer Coon will erect hotel, bank and general merchandise building; cost \$18,000. (See "Stores.")

Tex., Cuero.—Mr. Rathman, proprietor, reported to build annex to Muli Hotel at cost of \$20,000.

Tex., Slaton.—W. W. Compton will erect proposed hotel; 15 rooms; concrete.

Tex., Slaton.—Mrs. Trammell of Lamea, Tex., will erect hotel; 16 rooms.

MISCELLANEOUS

Ala., Opelika.—Stables.—L. T. Wimberly of Loachapoka, Ala., will erect livery stable to be occupied by W. M. Rowe; brick construction.

Ark., Fort Smith.—Clubhouse.—George Tites, president Progress Club, will receive bids until July 27 to erect clubhouse; plans and specifications on file at office of J. T. W. Jennings, Merchants' National Bank Bldg., Fort Smith, and at Builders' Exchange, Little Rock, Oklahoma City and Muskogee.

Ark., Hot Springs.—Bathhouse.—Imperial Bathhouse Co. will expend, it is reported, not less than \$41,000 to improve bathhouse.

Ark., Hot Springs.—Bathhouse.—New Waverly Hotel Co. will erect hotel and bathhouse; cost not less than \$150,000.

Ga., Columbus.—Skating Rink, etc.—Charles Renfrow and associates plan to establish summer garden, erect skating rink, etc.

Ga., Macon.—Georgia State Fair Association has appropriation of \$4000 from City Council for improvement to several fair buildings in Central City Park; will erect 50-foot extension to machinery hall, erect barber shop, 75-stall cattle shed and renovate women's rest room; T. O. Chesney, chairman of finance committee. (Recently incorrectly noted under Ga., Fair.)

Ky., Bowling Green.—Stable.—Patterson & Patterson will erect stable to replace burned structure. (Recently reported burned.)

La., New Orleans.—Clubhouse.—Mercantile Club, W. H. Ker, president, will improve clubhouse.

Md., Roland Park.—Clubhouse.—Baltimore Country Club has plans. It is reported, by Wyatt & Nolting, 1012 Keyser Bldg., Baltimore, for improvements to clubhouse; contractors estimating are Fred Decker & Sons, 1209 E. Biddle St.; Henry Smith & Son, 116 S. Regester St.; Gladfelter & Chambers, Parkdale and Maryland Aves.; John Cowan, 106 W. Madison St., all of Baltimore, and Roland Park Company, 408 Roland Ave., Roland Park.

Mo., Kansas City.—Garages.—Thwing & Walt will erect garage at 1412 E. 15th St.; cost \$10,000.

Mo., Kansas City.—Garage.—A. W. Hudson will erect garage recently noted; mill construction; 60x168 feet; steam heat; cost \$17,500; plans and erection by owner.

N. C., Winston-Salem.—Hospital.—Dr. S. Spainhour, H. S. Lott, John Bynum, J. E. Dowdy and others are interested in erection of proposed hotel.

S. C., Orangeburg.—Hospital.—Dr. Parker of Columbia, S. C., and associates are interested in erection of proposed hospital.

Tenn., Bristol.—Fair.—Board of Trade has arranged to erect manufactures building and construct stock pens, etc., for fair.

Tenn., Cleveland.—Orphanage.—J. V. Snow Orphanage plans to erect building.

Tenn., Humboldt.—Fair Buildings.—Humboldt Tri-County Fair Association plans to erect women's building and enlarge live stock pens.

Tenn., Nashville.—Clubhouse.—N. Baxter, Jr., has plans by Marr & Holman, Stahlman Bldg., Nashville, for clubhouse to be occupied by Nashville Commercial Club; probably seven stories; ordinary construction. Address architects. (Recently noted.)

Tenn., Paris.—Orphanage.—Thos. B. Walker, vice-president of First National Bank, is interested in erection of proposed orphan's home.

Tex., Houston.—Lumber Sheds.—H. D. Taylor Lumber Co., 517 Preston Ave., will erect 100x250-foot lumber sheds.

Tex., Houston.—Car Sheds and Offices.—Galveston-Houston Electric Co. will erect car

sheds and office building; one story; brick; 160x100 feet; cost \$20,000.

Tex., San Antonio—Hospital.—Grace Evangelical Lutheran Church contemplates erection of proposed hospital; Nic Peters, president of committee.

Tex., Yoakum—Undertaking.—A. E. Beck will erect two-story undertaking establishment; plans by J. Henry Yentzen, Yoakum.

Va., Richmond—Stables.—Mrs. A. R. Lawrence will erect stable; two stories; brick.

Va., Virginia Beach—Auditorium.—Baptist Young People's Union, Rev. W. W. Hamilton, president, Lynchburg, Va., will erect permanent auditorium; main building, seating capacity of 3000, with classrooms in addition for departmental work, each equipped with permanent blackboards, etc.; will also arrange for construction of bungalows, kitchens, etc.

W. Va., Wheeling—Clubhouse.—Carroll Club will improve clubhouse.

RAILWAY STATIONS

Ala., Bessemer.—Louisville & Nashville Railway, W. H. Courtenay, chief engineer, Louisville, Ky., is reported as to erect passenger station.

Ga., Valdosta.—Valdosta, Moultrie & Western Railroad Co., Gordon Tillman, chief engineer, will erect passenger station. (See "Railway Shops, Terminals, Roundhouses, etc.")

Mo., Cape Girardeau.—W. C. Nixon, vice-president St. Louis & San Francisco Railroad Co., advises Manufacturers Record that under present arrangements with city, company will not be required to begin work for more than two years on proposed passenger station; ordinance provides for stone or pressed brick structure to cost not less than \$35,000; will also build platform about 600 feet long. (Recently noted as at Mo., St. Louis.)

N. C., Thomasville.—Southern Railway, D. W. Lum, chief engineer maintenance of way and structures, Washington, D. C., awarded contract to W. B. Barrow, Raleigh, N. C., to erect station, and to American Machine & Manufacturing Co., Charlotte, N. C., for steam-heating installation; 24 feet 4 inches by 100 feet 4 inches; chert passenger platforms; pressed-brick construction.

Okla., Chickasha.—Chickasha Terminal Co. will receive bids until noon July 24 to erect superstructure of depot for Oklahoma Central Railway Co. (See Contracts Awarded, "Railway Stations.")

Okla., Tulsa.—Midland Valley Railroad Co., C. Kaighn, chief engineer, Muskogee, Okla., will erect freight depot; brick; 36x140 feet; one and two stories; platform 36x160 feet; cost \$800. (Previously noted.)

Tex., Beaumont.—St. Louis & San Francisco Railroad Co., W. C. Nixon, vice-president, St. Louis, Mo., states that plans relative to recently-reported station are not ready for announcement.

Tex., Crockett.—International & Great Northern Railroad, O. H. Crittenden, consulting engineer, Palestine, Tex., has completed improvements to station recently noted.

Tex., Temple.—Missouri, Kansas & Texas Railway, S. F. Fisher, construction engineer, has plans for station; 40x184 feet; pressed brick and terra-cotta; cost \$40,000. (Previously noted to erect this structure.)

Va., Portsmouth.—Norfolk & Western Railroad, C. S. Churchill, chief engineer, Roanoke, Va., will, it is reported, erect passenger station; cost about \$125,000.

W. Va., Fairmont.—Fairmont & Clarksburg Traction Co. will erect freight station.

SCHOOLS

Ala., Ensley.—Board of Education is reported as having plans prepared by D. O. Whildin, Birmingham, Ala., for proposed high-school building to cost about \$60,000; John L. Parker, president of board.

Ala., Montevallo.—City voted \$5000 bond issue to erect school. Address The Mayor.

Ala., Ragland.—Alabama School of Trade and Industries, Charles P. Smith of Gadsden Jury, Napoleonville, La., appropriated appropriation to erect proposed industrial school.

Ark., Conway.—Hendrix College, J. W. Conger, president, will make improvements, including installation of steam-heating plant for main building and two dormitories; contract not yet awarded; cost within \$8000.

Ark., Marion.—City has plans by Weathers-Foley Company, Inc., Memphis, Tenn., for proposed school; fireproof; steam heat; electric lights, signals, etc.

Fla., Gulfport.—Special Tax School Dis-

trict No. 60 has plans by Bonniwell & Son, St. Petersburg, for school building; 46x70 feet; four classrooms; cement; stone block; asbestos roof; cost \$3000; bids opened; may let contracts separately. (Recently noted.)

Fla., Gulfport, P. O. St. Petersburg.—Trustees School District No. 60 had plans prepared by Bonniwell & Son, St. Petersburg, for \$3900 school building recently mentioned; one story; cement blocks; 64x54 feet; contract not awarded.

Ga., Dawson.—School Board, M. C. Edwards, president, invites bids to erect two-story addition to school building; plans by T. F. Lockwood, Columbus, Ga.; L. Lamar, chairman building committee. (Recently noted.)

Ga., Senola.—Board of Education will erect school.

Ky., Louisville.—Samuel D. Jones, business director of Board of Education, Administration Bldg., will receive bids until July 23 to erect addition to George Rogers Clarke school, Payne and Galt Sts.; plans and specifications on file at office of Hermann Wischmeyer, Kenyon Bldg.

La., Angie.—Angie School District voted \$3000 bond issue to erect school. Address Washington Parish School Board, Franklinton, La.

La., Bruley St. Vincent (not a postoffice). Assumption Parish Police Jury, Napoleonville, La., appropriated \$3500 to erect school. (See "Schools," La., Napoleonville.)

La., Paradis.—Board of School Directors, Luther A. Young, president and T. B. Sellers, secretary, will receive bids until August 17 to erect two-room frame school; plans and specifications at office of secretary.

La., Labadieville.—Assumption Parish Police Jury, Napoleonville, La., appropriated \$15,000 to erect school; brick. (See "Schools," La., Napoleonville.)

La., Napoleonville.—Assumption Parish Police Jury appropriated \$15,000 for school at Labadieville, La., \$8000 for school ground and four-room annex to Napoleonville high school and \$2500 for school in Bruley St. Vincent.

La., New Orleans.—Tulane University Board has plans by Andry & Benderhage to erect Stanley O. Thomas building at university; three stories; fireproof; cost \$49,767. (Lately noted.)

La., Slidell.—City will expend \$2500 to erect school building; 60x100 feet; three stories; ordinary construction; steam heat; electric lighting; plans by Stevens & Nelson Company, 1109 Honnen Bldg., New Orleans, La. (Recently noted to receive bids until July 20.)

Md., Baltimore.—Friends School contemplates erecting addition to school at 1712 Park Pl.; contractors estimating are W. E. Harn Company, 213 N. Calvert St.; J. Henry Miller 106 Dover St.; Morrow Bros., 218 Saratoga St., all of Baltimore; plans by C. M. Anderson, 324 N. Charles St., Baltimore.

Md., Leonardtown.—St. Mary's Academy opened bids to erect school building recently noted; two stories and basement; 83x51½ feet; eventually hot-water heat; cost \$10,000; plans by Thomas C. Kennedy, 211 N. Calvert St., Baltimore, Md.

Miss., Ellisville.—City will vote July 29 on \$10,000 bond issue for school improvements; J. T. Taylor, Mayor.

Miss., Jackson.—Rev. R. V. Lancaster, McComb City, Miss., will be in charge of proposed Presbyterian college to be erected in Jackson.

Mo., Buckner.—School Trustees will open bids July 21 to erect school building; 27x50 feet; two stories and basement; ordinary construction; steam heat; cost \$3000; plans by U. G. Lichler, Buckner. (See "Machinery Wanted.")

Mo., Rolla.—Executive board of School of Mines of University of Missouri will receive bids until August 7 to erect library and auditorium building; cost \$65,000; George W. Hellmuth, St. Louis, Mo.; Thos. J. Wornall, chairman of board. (Recently noted.)

N. C., Charlotte.—City contemplates erection of additional schools in Wards 3 and 4, North Charlotte, Piedmont and other suburbs; Joseph Flrth, City Engineer. (Recently noted as voting \$100,000 school bonds.)

N. C., Fayetteville.—J. A. Oates, chairman of Board of Trustees of Fayetteville graded schools, will receive bids until July 24 to erect three brick graded schools; certified check for \$1000; plans and specifications at office of Mr. Oates at Fayetteville or of J. F. Leitner, architect, Wilmington, N. C.

N. C., Shelby.—Ella, Lilly and Belmont cotton mills in South Shelby will erect school; four rooms; cost, including site, \$3500; Harris Ramsey, A. W. McMurry and J. R. Dover, building committee.

N. C., Summerfield.—Gulfport County Board

of Education will locate high school and farm-life school at Summerfield.

N. C., Winston-Salem.—City will vote August 8 on \$60,000 bond issue for school improvements. Address The Mayor. (Noted in June.)

Okla., Checotah.—Board of Education will erect high school and ward school buildings; plans by Smith, Parr & Van Doren, Muskogee, Okla.; W. J. Cook, clerk of board.

Okla., Muskogee.—Board of Education will receive bids on special blank forms furnished by architects until 5 P. M. July 24 to erect additions to Manual High School for Negroes; certified check for \$500; plans and specifications at office of Dawson, Kedan & Valeur, architects, 412 Iowa Bldg., Muskogee; plans may be had on deposit of \$25 and specifications on deposit of \$10.

Okla., Rocky.—E. D. Evans, clerk of Board of Education, will receive bids until 10 A. M. July 25 to erect school; certified check for 5 per cent. amount of bid; plans and specifications at office of Mr. Evans at Rocky, or of H. E. Williams & Co., architects, Chickasha, Okla., or may be had on deposit of certified check for \$10.

Tenn., Cornersville.—Cornersville Training School, Leroy Reynolds, principal, will erect dormitory.

Tex., Austin.—Alumni Association of University of Texas plans to erect gymnasium building.

Tex., Beaumont.—South Park Independent school district has plans by W. H. Callihan for school annex recently noted; classrooms and manual training-room; brick, etc.; cost \$4500; electric lighting; heating not decided.

Tex., Brownsville.—City voted bonds to erect and equip industrial department to school. Address The Mayor.

Tex., Canadian.—City voted \$6500 for school improvements. Address The Mayor.

Tex., Dublin.—School Board, Dublin Independent school district, has plans by Waller & Field, Fort Worth, Tex., to remodel school; cost \$10,000; stone building; metal shingles; steam heat; wiring, etc. Address J. W. Dunlap, Dublin. (Recently noted.)

Tex., Fort Worth.—Polytechnic College has plans by Waller & Field, Fort Worth, for proposed improvements to art building; brick construction; tar and gravel roof, etc.; cost \$15,000; date of opening bids not set.

Tex., Harrisburg.—Harrisburg Independent school district voted \$15,000 bond issue to erect school. Address district school trustees. (Recently noted.)

Tex., Loving.—School Board, J. H. Johnson, secretary, has plans by Waller & Field, Fort Worth, Tex., for school building; six rooms; ordinary construction; cost \$10,000; date of opening bids not decided. (Previously noted.)

Tex., Madisonville.—City will award contract July 25 for proposed high school; 10 rooms and auditorium; brick and wood; steam heat; plans by Waller & Field, Fort Worth, Tex.; Thos. W. Byers, secretary of board.

Tex., Port Neches.—Port Neches School District has plans by J. T. Smith, Beaumont, Tex., for school; two stories; six rooms and auditorium; brick; issued \$20,000 worth of bonds. (Recently noted.)

Tex., Fort Worth.—Texas Christian University accepted plans for proposed Clarke Memorial Hall.

Tex., Lyford.—Lyford Independent School District, A. S. Schlecht, secretary, will receive bids until 1.30 P. M. July 22 to erect proposed school; certified check for \$400.

Tex., Rice.—School Board, W. H. Neal, secretary, has plans by Waller & Field, Fort Worth, Tex., for two-story school building; eight rooms and auditorium; steam heat; cost \$15,000; date of opening bids not decided. (Previously noted.)

Va., Driver.—Sleepy Hole School District will vote July 29 on \$16,000 bond issue to erect school and make improvements. Address District School Trustees.

Va., Herndon.—Herndon School District voted \$10,000 bond issue to erect school. Address District School Trustees.

Va., Williamsburg.—William and Mary College, Dr. Lyon G. Tyler, president, will install heating and light plant; improvements in progress. (Recently noted to expend \$30,000 for proposed improvements.)

STORES

Ala., Birmingham.—Elliott Knight will erect two one-story buildings; cost \$5000.

Ala., Birmingham.—W. G. Tyler will erect building; one story; frame; cost \$6000.

Ala., Birmingham.—Louis Pizitz is having plans prepared by Harry Wheelock, Bir-

mingham, for improvements to building at Second Ave. and 19th St.; will install one plate-glass window entire length of store, remodel interior of both first and second floors, etc.; cost \$25,000.

Ark., Argenta.—C. J. Humphreys has plans by J. Whitehead, Little Rock, Ark., to remodel drug store to be occupied by Hall Drug Co.; two stories; brick; cost \$5000. (Recently noted.)

Ark., Little Rock.—Southern Trust Co. will, it is reported, erect business building; four stories; pressed brick; 82x150 feet; cost \$40,000.

Ark., Little Rock.—Loftus Collamore will erect business building; two stories; brick; cost \$38,000.

D. C., Washington.—Isaac Krikateine, 2150 P St. N. W., will erect store and dwelling on L between 15th and 16th Sts. N. W.; three stories.

D. C., Washington.—Jacob C. Rose; William R. Hodges, 1321 F St. N. W.; John G. Slater, National Metropolitan Bank Bldg., and others purchased nine dwellings at 2404-23 14th St. N. W. and will convert into stores at cost of \$1500 each.

Fla., Jacksonville.—Southern Drug Co. is having plans prepared by W. B. Camp, Jacksonville, for business building; six stories; steel and reinforced concrete; fireproof; automatic alarms and sprinkler systems; steam heat; electric elevators; cost \$50,000.

Fla., Jacksonville.—LeFils-Metcalf Shoe Co. will erect addition to store; one story; brick; 16x17 feet.

Ga., Macon.—Dr. W. G. Lee is receiving bids through Architect Curran R. Ellis, Macon, to erect two stores; two stories and basement; 52x201 feet; pressed brick; Georgia marble trimmings; metal roof; steel beams and ceiling; freight elevator.

Ga., Norcross.—C. P. Lively will erect store building; brick construction.

Ga., Norcross.—Lummus & Webb will erect business building; concrete block; 40x130 feet.

Ga., Valdosta.—C. C. Varndoe Company will receive bids until August 1 to erect store building; two stories; 30x125 feet; brick; stone trimmings; metal ceiling and beams; metal roof; cost \$5000; plans by Curran R. Ellis, Macon, Ga.

Ky., Bowling Green.—Woodcock Estate will erect store building for G. A. Willoughby; about 30x100 feet; concrete floor; plate-glass front; wareroom in rear.

La., Rayville.—George J. Glover of New Orleans, La., will erect two stores; brick construction.

La., New Orleans.—Muller Dry Goods Co. will erect store building.

Md., Baltimore.—Henry Joesting, Jr., Baltimore and Liberty Sts., will erect store building on Light St.

Md., Lonaconing.—Lonaconing Co-operative Store is negotiating for Jackson St. site, and if deal is consummated will erect store building.

Mo., Kansas City.—P. H. Strange will erect store and apartment-house at 346 N. Hardy St.; cost \$4800.

Mo., Pittsburg.—A. B. Kirkwood will erect store, office and apartment building to replace structure recently burned; three stories; brick; cost \$60,000; first floor for stores, 50 offices on second floor and apartments on third floor.

Mo., Kansas City.—Kansas City Breweries Co. will erect store building; brick; cost \$6000.

Mo., St. Louis.—Neustadt Auto Supply Co. will erect business building; two stories; 56x100 feet; cost \$35,000.

Mo., St. Louis.—O'Neill Ryan will erect Thurles business block on Delmar and Hamilton Sts.; 100x55 feet; three stories; exterior of granite-colored stock brick and white cut stone; Florentine arched windows with tapestry panels; first floor will contain five stores; upper floors, four apartments of six and seven rooms each; private baths; interior finish mahogany and oak; each apartment with outside porches; plans by Ernest Priesler; Weisels-Gerhart Real Estate Co. in charge of construction; cost \$50,000.

Mo., St. Louis.—Frank A. Ruff, president Antikampla Company, will erect store corner 20th and Pine Sts.; cost \$50,000.

N. C., Greensboro.—Dr. F. W. McNair will erect business building; cost \$3000.

N. C., Greensboro.—R. R. King will erect business building; three-stories; brick.

N. C., Wadesboro.—Dr. E. A. Covington and B. G. Covington will erect business building; two stories and basement; pressed brick and plate-glass front; construction under supervision of B. G. Covington.

Okla., Braggs.—Elmer Coon will rebuild re-

cently-burned structure; for bank, general merchandise and hotel; fireproof; 75x100 feet; cost \$18,000; electric lighting; plans by H. H. Brickley, Muskogee, Okla. (See "Machinery Wanted.")

Okla., Medford.—P. A. Falkenberg will erect two-story fireproof building; 25x100 feet; local labor. (Recently noted to rebuild.)

Tex., Denton.—J. M. Craddock will erect business building to replace burned structure; one story; awarded contract to J. Johnson & Son, Denton, for brick work; will replace wagon yard on east with brick wall 17 feet high and wooden wall on south side with composition roof. (Recently reported burned with \$10,000 loss.)

Tex., Luling.—Thomas Wilson, Sr., will expend \$6000 to erect store building recently noted; 60x70 feet; semi-fireproof construction; electric lighting; heating plant to cost \$50; plans and construction by owner. (See "Machinery Wanted.")

Tex., Shiner.—Jul. Lefland, architect, National Bank of Shiner, receives bids until 4 P. M. July 20 to erect business building; two stories; brick; 50x130 feet; certified check for \$300; plans at office of architect at Victoria, Tex., or at National Bank of Shiner at Shiner.

Tex., Shiner.—Wm. Green has plans by Jules Lefland, Victoria, Tex., for two-story store and office building; cost \$20,000. (Recently noted.)

Tex., San Antonio.—J. McCord Watson will erect business building.

THEATERS

Fla., Key West.—Fleitas, Ranaguera & Diaz will open bids in September to erect theater recently noted; 115x45 feet; cement and tile; cost \$15,000; plans by Frank Russell, Key West. Address J. F. Fleitas, Box 293.

Md., Baltimore.—Ford's Opera-house, Chas. E. Ford, manager, Fayette St. near Eutaw St., will, it is reported, make improvements to theater, including installation of cement floors and walls, making entire structure fireproof, converting balcony into marquee, installing stone steps near interior areas, etc.; improvements in progress.

N. C., Asheville.—Buncombe County Branch of Farmers' Co-operative Union of America will expend \$3000 to establish warehouse; J. C. Cowan, G. L. Fortune and others are interested.

S. C., Charleston.—W. R. Wilson, manager of A. G. Rhodes & Sons' store, is having plans prepared by Mr. Pittman of Atlanta, Ga., for proposed vaudeville theater; site 120x300 feet.

Tenn., Ripley.—William Tucker & Co. will erect warehouse; four stories; brick.

Tex., San Antonio.—Interstate Amusement Co. has plans and will start construction in September of theater previously noted; cost \$150,000; will award contract to H. L. Steres & Co., San Antonio.

W. Va., Fairmont.—T. Wilbur Hennen has plans by Bates & Franzheim, Wheeling, W. Va., to erect theater recently noted; to be occupied by Charles E. McCray, Jr.; 40x70 feet; stone, brick and wood construction; heating not decided; electric lighting; cement and glass pavement; cost \$12,000; day labor; Holbert & Spedden will supervise construction. (See "Machinery Wanted.")

WAREHOUSES

La., Lafayette.—Wells, Fargo & Co., 51 Broadway, New York, will erect warehouse on Lincoln Ave.

Mo., Kansas City.—International Harvester Co. will erect addition to warehouse at 14th and Liberty Sts.; cost \$30,000.

Mo., Springfield.—Estes Warehouse Co. receives bids until 6 o'clock July 20 to erect reinforced concrete warehouse on Phelps Ave.; plans and specifications on file at office of company, corner Summit and Mill Sts.

Mo., St. Louis.—St. Louis Glue Manufacturing Co. will erect warehouse; two stories; cost \$5000.

Mo., St. Louis.—Missouri Candy Co. will expend \$13,000 for improvements to warehouse.

N. C., Oriental.—Pamlico Cotton Oil Mills & Warehouse Co. incorporated with \$50,000 capital stock by J. L. Dawson, O. C. Daniels and others.

Tenn., Ripley.—William Tucker & Co. will erect warehouse; four stories; brick.

Tex., Houston.—W. H. Young of Houston is lowest bidder at \$11,268 to erect warehouse of Brown Candy & Cracker Co. (Late-ly noted.)

W. Va., Lansing.—Lorain Coal & Dock Co. is receiving bids to erect storeroom; frame; 100 feet deep; two stories.

Va., Richmond.—R. J. Reynolds Tobacco

Co., main office, Winston-Salem, N. C., will erect additional story to warehouse now under construction; reinforced concrete and brick; cost \$12,000.

BUILDING CONTRACTS AWARDED

APARTMENT-HOUSES

Ala., Mobile.—Waring Harrison, agent for Waring estate, awarded contract to erect apartment and store building. (See "Stores.")

Ark., Little Rock.—Pugh & Matthews awarded contract to Thalman & Reed, Little Rock, to erect apartment and store building previously noted. (See "Stores.")

Ark., Little Rock.—Matthews & Pugh awarded contract to Thalman & Reed, Little Rock, to erect apartment and business building; two stories; cost \$35,000.

Tex., Houston.—Ben Levy awarded contract to H. E. Schmitz & Son, 1212 Congress St., Houston, to erect apartment-house; 44x86 feet; cost \$12,000; plans by Jones & Tabor, Houston. (Recently noted.)

Md., Baltimore.—S. Zeto awarded contract, it is reported, to James J. Duggan, 317 Garrett Bldg., Baltimore, to erect apartment-house at 2381 W. Baltimore St.; three stories; plans by Silvio Tosi.

ASSOCIATION AND FRATERNAL

N. C., Winston-Salem.—Order of Eastern Star, Ancient Free and Accepted Masons, awarded contract to Ange Construction Co., Winston-Salem, to erect lodge building.

BANK AND OFFICE

Ga., Millen.—T. Z. Daniel awarded contract to erect building to contain bank, store, postoffice and hotel recently noted. (See "Hotels.")

Miss., Meridian.—Frank Helms awarded contract to Alonzo Hancock, Meridian, to erect office and store building. (See "Stores.")

Miss., Lucedale.—Oliver & Co. of Hattiesburg, Miss., have contract to erect office building.

N. C., Raleigh.—Raleigh Banking & Trust Co. awarded contract to J. B. Carr & Co., Atlanta, Ga., to erect bank and office building at Fayetteville and Hargett Sts.; 80x170 feet; granite and limestone; four stories; plans by P. Thornton Marye of Atlanta, Ga. (Late-ly noted.)

N. C., Raleigh.—Raleigh Banking & Trust Co. awarded contract to J. B. Carr & Co., Atlanta, Ga., to erect office building; three and a half stories; Grecian style; 80x130 feet; granite and white limestone; cost \$80,000; plans by P. Thornton Marye, Atlanta, Ga. (Recently noted.)

N. C., Winston-Salem.—Merchants' National Bank awarded contract to J. F. Ange, Winston-Salem, to improve bank building; will remodel front, provide side entrance, install new fixtures, vaults and terrazzo floor; cost \$2000; plans by W. C. Northup, Winston-Salem.

Miss., Osyka.—Board of directors of Farmers' Bank awarded contract to J. J. Ott and R. F. Ricks, Osyka, to erect bank building; two stories; pressed brick.

Va., Charlottesville.—Jefferson National Bank awarded contract to King Lumber Co., Charlottesville, to erect bank building; pressed-brick and plate-glass front; first floor to be fitted up in bronze, marble and tile, with mahogany trimmings; second floor to be used as offices. (Previously noted. See "Machinery Wanted.")

W. Va., Wheeling.—German Bank awarded contract to Samuel Nesbitt, Wheeling, to erect three additional stories to bank building and otherwise improve same; hollow tile walls and ceilings; fireproof construction; 118 offices. (Previously noted.)

W. Va., Winding Gulf.—Bank of Winding Gulf will erect building at cost of \$3500; brick and stone; 24x44 feet; electric lighting; plans by Mr. Salder, Mt. Hope, W. Va.; contractor, Graham Contracting Co., Graham, W. Va. (Recent notice slightly incorrect.)

CHURCHES

Ky., Franklin.—Methodist Church South, Rev. J. R. McAfee, pastor, awarded contract to Roemer Bros., Bowling Green, Ky., to erect edifice; brick veneer; 70x90 feet; steam heat; electric lighting; cost \$20,000; plans by Runge & Dickey, Nashville, Tenn. (Previously noted.)

N. C., Winston-Salem.—Brown Memorial congregation awarded contract at \$6500 to A. H. Walls, Winston-Salem, to complete and furnish edifice at 4th and Spring Sts.

S. C., Anderson.—Central Presbyterian Church awarded contract to Mr. McMaster of Columbia, S. C., to erect Sunday-school room; plans by Wilson & Sompayrac of Columbia, S. C.; cost \$6000. (Late-ly noted.)

Tenn., Bristol.—Methodist Episcopal Church awarded contract to J. C. Murphy, Knoxville, Va., to erect edifice; concrete foundation; gray-pressed brick; cost \$20,000.

Tenn., Bristol.—Methodist church awarded contract to J. C. Murphy of Knoxville, Tenn., to erect edifice; gray pressed brick; concrete foundation; cost \$20,000; construction begun.

Tenn., Nashville.—Immanuel Baptist Church, Rev. Rufus W. Weaver, pastor, has plans by Russell E. Hart, Nashville, for edifice; Greek cross form; light brick; limestone trimmings; broad stone steps leading to three main entrances; main entrance vestibule 9 feet 6 inches by 31 foot 6 inches leading directly to gallery; roof garden; wood-work of gallery fronts, seats, etc., of birch-stained mahogany; white oak auditorium floor; indirect lighting; heating plant in basement; Italian renaissance style; cost \$30,000; all contracts let. (Recently noted.)

Tex., Waco.—First Presbyterian Church awarded contract to Fell & Almsworth, Waco, to erect edifice; Old English style; cost, including light, heat and plumbing, \$50,000. (Previously noted.)

CITY AND COUNTY

Ky., Catlettsburg.—City Hall.—City awarded contract to I. A. Rhodes, Huntington, W. Va., to erect city hall and jail recently noted; cost \$15,000; plans by R. L. Day, Huntington. Address contractor.

La., Ville Platte.—Jail.—Police Jury of Evangeline Parish awarded contract at \$73,400 to C. D. Stewart of Baton Rouge, La., to erect jail and courthouse.

Mo., St. Louis.—Engine-house.—Board of Public Improvements awarded contract to Wall Bros., St. Louis, to erect proposed engine-house No. 52 on Clayton Ave.; cost \$14,185.

COURTHOUSES

La., Ville Platte.—Police Jury of Evangeline parish awarded contract at \$73,400 to C. D. Stewart, Baton Rouge, La., to erect courthouse and jail; plans by Emile Weill of New Orleans.

Tex., Floydada.—Floyd County Commissioners awarded contract to L. L. Thurmond, Dallas, Tex., to erect proposed courthouse; cost \$75,000.

DWELLINGS

Ala., Corey, R. F. D. from Ensley.—Tennessee Land Co. awarded contract to Realty Construction Co., Birmingham, Ala., to erect 31 dwellings; one and two stories; four to eight rooms each; cost \$70,000.

Ala., Corey, R. F. D. from Ensley.—Corey Land Co. awarded contract to Realty Construction Co., Birmingham, Ala., to erect 12 dwellings, four, five, six and eight rooms each; cost \$35,000.

Ala., Fayette.—Dr. J. A. Branyon awarded contract to Charles W. Hall of Birmingham, Ala., to erect dwelling; 40x30 feet; two stories; brick.

Ark., Little Rock.—L. B. Leigh awarded contract to J. F. Williams, Little Rock, to erect residence; two stories; frame; cost \$5000.

D. C., Washington.—Frank C. Daniel, 8 Rhode Island Ave. N. W., awarded contract to John Simpson's Sons, Washington, to erect dwelling at 3815 Jocelyn St. N. W.; two stories; frame; cost \$4000; plans by E. D. Ryonson, 3579 Northampton St. N. W., Washington.

Fla., Daytona.—Dr. Edith-Brush Shoemaker awarded contract to E. H. Shoemaker, Daytona, to erect residence recently noted; 28x37½ feet; coquina veneer; cost \$3000.

Ga., Atlanta.—Mrs. Rose E. Chapman, 637 Highland Ave., awarded contract to Padgett Construction Co. to erect dwelling; hot-air heat; cost \$3500; plans by J. Head, Candler Bldg., Atlanta. (Recently noted.)

Ga., Leesburg.—E. B. Martin awarded contract to E. T. Stalker, Leesburg, to erect residence; brick.

Ga., Macon.—W. J. Barnes awarded contract to E. L. Oliver to erect frame bungalow; cost \$2500; plans by Frank R. Happ, Macon. (Recently noted.)

Ga., Macon.—H. K. Burns awarded contract to Shaw Bros. to erect Spanish Mission dwelling; stucco on metal laths; one story; tile roof; steam heat; cost \$7000; plans by Frank R. Happ, Macon. (Recently noted.)

Md., Baltimore.—Frederick Loos, 1303 E. Lanvale St., awarded contract to J. P. Brandau, 700 E. North Ave., Baltimore, to erect three dwellings on Harford Rd.; two stories; brick; 14x55 feet; cost \$5000; plans by A. L. Blatchley, Baltimore.

Md., Baltimore.—Karl G. Pollack awarded contract to Webb & White, Maryland Telephone Bldg., Baltimore, to erect residence at Hill Top Park; two stories; frame; hardwood finish; beam ceilings; steam heat; cost about \$5000.

Md., Chestertown.—John D. Eurie has plans by and awarded contract to Walter T. Pippin, Chestertown, to erect dwelling; 26x33 feet and 16x25 feet; ordinary construction; vapor heat; electric lighting; cement sidewalks; cost \$10,000. (See "Machinery Wanted.")

Md., Naumana (not a postoffice).—Fred Gottlieb of Gottlieb-Bauernschmidt-Strass Brewing Co., Central Ave. and Fawn St., Baltimore, Md., awarded contract to J. F. Morgan Building Co., 1300 S. Charles St., Baltimore, to erect residence; two and a half stories; colonial style; 41x36 feet; steam heat; gas and electric lighting; cost \$7000; plans by Emory & Nusscar, Professional Bldg., Baltimore.

Md., Roland Park.—E. Clay Shiner, 504 Keyser Bldg., Baltimore, Md., awarded contract, it is reported, to Roland Park Co., 408 Roland Ave., Roland Park, to erect cottage at Roland Heights; two and one-half stories; brick.

Md., Walbrook.—Frank H. McMullen awarded, it is reported, contract to Provident Realty Co., Garrison and Piedmont Aves., Baltimore, to erect bungalow at Reuland Villas; one and one-half stories; slate roof.

Mo., Kansas City.—H. A. Calhoun awarded contract to Herman & Son, Kansas City, to erect dwelling; 20½x38 feet; brick and stucco; combination gas and coal furnace; gas and electric lighting; plans by J. C. Wright, Kansas City. (Recently noted.)

N. C., Charlotte.—Union Realty Co. awarded contract to S. L. Vaughn, Charlotte, to erect residence.

N. C., Winston-Salem.—T. R. Pepper awarded contract to J. E. Kenerey to erect \$500 dwelling; two stories and basement; frame; slate roof; electric lighting.

S. C., Anderson.—Mr. Lesser awarded contract to J. E. Barton for erection of \$1000 dwelling.

S. C., Greenville.—W. T. Henderson has plans by and awarded contract to D. H. Attaway, Greenville, to erect residence; nine rooms; bungalow type; cost \$3000.

Tenn., Harriman.—Charles H. Hornsby awarded contract to John T. Hood, Harriman, to erect addition to residence on Unaka St.

Tex., Cuero.—Dunn Houston awarded contract to Mr. Fuess, Cuero, to erect residence; two stories; ten rooms, with galleries and colonial pillars; cost \$9000.

Tex., Denton.—College of Industrial Arts awarded contract to W. F. Maxey, Denton, to erect president's home on college campus; eight rooms; two and a half stories; frame; hot-air heat; electric lights; plumbing and wiring contracts not awarded.

W. Va., Wheeling.—Mrs. Rose Welty awarded contract to J. W. Beltz & Sons, Wheeling, to erect residence; brick and terra-cotta; 25 rooms; cost \$35,000; plans by E. B. Franzheim, Wheeling.

GOVERNMENT AND STATE

D. C., Washington.—Laboratory.—Director of Bureau of Standards awarded contract at about \$17,000 to J. E. and A. L. Pennock to erect laboratory on Pierce Mill Rd.; plans by Wood, Donn & Deming, 808 17th St. N. W., Washington. (Recently noted.)

Miss., Bay St. Louis.—Postoffice.—Hancock County Bank awarded contract to Mr. Chevally of Gulfport, Miss., to erect postoffice building; plans by Southron Duval, 606 Common St., New Orleans. (Recently noted.)

Va., Suffolk.—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., awarded contract at \$66,950 to J. H. Brinson, Hampton, Va., to erect postoffice building. (Recently noted.)

HOTELS

Ga., Ludowici.—C. J. McDonald awarded contract to erect hotel and store building. (See "Stores.")

Ga., Millen.—T. Z. Daniel awarded contract to C. A. Clark, Covington, Ga., to erect hotel, store, postoffice and bank building; 153x145 feet; five stories and bank on first floor; ordinary construction; brick; heating plant to cost \$4000; gas and electric lighting; cost \$30,000; plans by A. F. N. Everett, Grand Bldg., Atlanta. (Recently noted.)

Ga., Savannah.—R. M. Hicks awarded contract to E. Morgan, Savannah, to erect proposed hotel; four stories; marquis canopies to extend over entrances; steam heat; elevator service; plans by H. W. Witcover, Savannah.

Ga., Valdosta.—W. L. Fender awarded contract to W. T. Jay & Co., Pelham, Ga., to erect hotel; five stories; 100 rooms; elevator; hot and cold water in all rooms; plans by Curran Ellis, Macon, Ga. (Previously noted.)

La., Donaldsonville.—Donaldsonville Hotel Co. awarded contract to C. D. Stewart of Baton Rouge, La., to erect hotel; 83x85 feet; steam heat; four stories; electric lights; electric elevator; cost \$36,000; plans by Favrot & Livaudais, New Orleans, La. (Recently noted.)

La., Monroe.—E. Fudicker awarded contract to E. Mauser to erect two buildings on De Sade St. near 5th St.; two stories; cost \$39,000.

S. C., Rock Hill.—W. W. Miller, Rock Hill, and Hook & Rogers, Charlotte, N. C., awarded contract at \$10,000 to Wilkerson-Moffatt Construction Co., Durham, N. C., to remodel Carolina Hotel; contract for steam heating not let.

Tenn., Harriman.—John T. Hood has contract to erect addition to Hotel Archer on Roane St.; cost \$7500.

MISCELLANEOUS

Md., Baltimore.—Nurses' Home.—Hospital for Women of Maryland, Lafayette Ave. and John St., awarded contract to Edward Brady & Sons, 1109 Cathedral St., Baltimore, to erect proposed nurses' home adjoining hospital; three stories; brick; cost about \$9500.

Miss., Bay St. Louis.—Postoffice.—Hancock County Bank awarded contract to Mr. Chevally of Gulfport, Miss., to erect postoffice. (See "Government and State.")

S. C., Anderson.—J. E. Barton has contract to erect two-story brick garage; 60x100 feet.

Tenn., McMinnville.—Hospital.—T. O. Burger awarded contract to erect hospital building; six wards, sterilizing plant, operating-room, sanitary kitchen and storeroom; cost \$10,000.

Tex., Waco.—Fair Building.—Texas Cotton Palace Association awarded contract at \$23,428 to Dave Martin, Waco, to erect machinery hall and floral exhibit building, 80x250 feet and 60x150 feet, respectively. (Recently noted.)

W. Va., Wheeling.—Market-Auditorium.—Market-Auditorium Company awarded contract to N. C. Hamilton, Wheeling, to erect market and auditorium building; two stories; fireproof; steel concrete and terra-cotta; 59 stalls; cost about \$150,000; plans by Fred F. Faris, Wheeling. (Recently more fully detailed.)

RAILWAY STATIONS

La., Natchitoches.—Louisiana & Northern Railroad, John Jay Nelson, vice-president, Homer, La., awarded contract to erect passenger station; 34x100 feet; fireproof construction; steam heat; cost \$15,000; plans by M. P. McArdle, St. Louis.

N. C., Statesville.—Southern Railway, D. W. Lum, chief engineer maintenance of way and structures, Washington, D. C., awarded contract to erect proposed station; pressed brick; 20x100 feet.

Okla., Chickasha.—Oklahoma Central Railway Co., Dorset Carter, president, Purcell, Okla., awarded contract to W. F. Warfield, Chickasha, for substructure of depot, including excavation, foundation, concrete work and some grading, and Chickasha Terminal Co. will receive bids until noon July 24 to erect superstructure only of station building; certified check for 5 per cent. amount of bid; plans and specifications on file at office of Harold Macklin, architect, Chickasha, on deposit of \$25. (Previously noted.)

Tenn., Harriman.—Harriman, Knoxville & Eastern Railway, W. J. Clark, Harriman, chief engineer, awarded contract to John T. Hood & Co., Harriman, to erect depot; cost \$500.

Tex., Brady.—Gulf, Colorado & Santa Fe Railway, F. Merritt, chief engineer, Galveston, Tex., awarded contract to H. D. McCoy, Cleburne, Tex., to erect brick passenger station. (Lately noted.)

SCHOOLS

Ala., Talladega.—Alabama Synodical College for Women awarded contract to erect college building.

Ark., Pine Bluff.—Pine Bluff School Board awarded contract to W. S. Helton, Pine Bluff, to erect \$12,000 school.

D. C., Washington.—School Commissioners District of Columbia awarded contract to Davis Construction Co., Union Trust Bldg., Washington, to erect annex to Armstrong Manual Training School. (Lately noted.)

Ga., Dalton.—City awarded contract at \$5600 to erect school. Address The Mayor.

Ga., Dalton.—City awarded contract at \$5600 to J. L. Oxford, Dalton, to erect proposed North Dalton school.

Ky., Middlesboro.—City awarded contract to L. A. Galyon (recently noted as lowest bidder) to erect high school; ordinary construction; 73x85 feet; steam heat; electric lighting; cement sidewalk; cost \$18,000; plans by Baumann Bros., 713 Henson Bldg., Knoxville, Tenn.

Md., Frederick.—Board of County School Commissioners awarded contract at \$44,915 to Lloyd C. Culler of Frederick to erect Boys' High School; fireproof construction; plans by Parker, Thomas & Rice, Union Trust Bldg., Baltimore, Md. (Recently noted.)

Miss., Ellisville.—Jones County Agricultural High School awarded contract to Oliver & Campy to erect dormitory; cost \$10,000; plans by P. J. Krouse, Meridian, Miss. (Previously noted.)

Miss., Hickory.—City awarded contract to Oliver & Co., Hattiesburg, Miss., to erect school.

Miss., Newton.—City awarded contract to Burkes Bros. & Fleming Company, Hattiesburg, Miss., to erect school building; brick; ordinary construction; cost \$25,000; plans by Xavier A. Kramer, Magnolia, Miss. (Recently noted.)

Miss., Newton.—City awarded contract at \$21,816 to Burkes Bros. & Fleming, Hattiesburg, Miss., to erect school; brick construction; plans by N. A. Kramer, Magnolia, Miss. (Recently noted.)

Mo., St. Louis.—Principia Park Realty Co. awarded contract to W. M. Sutherland Building & Construction Co., St. Louis, to erect school dormitory; 200x45 feet; fireproof construction; steam heat; electric lighting; cost \$80,000; plans by W. B. Htner, St. Louis; all contracts let. (Recently noted.)

N. C., High Point.—City awarded contract to J. H. Montgomery, High Point, to erect school; two stories; brick; cost \$9000.

N. C., High Point.—School Commissioners awarded contract to erect brick school building recently noted; A. E. Tate, chairman building committee.

Okla., Miami.—City awarded contract to W. B. Schmucker, Miami, to erect two ward schools and one central school building; cost \$70,000. (Recently noted.)

Okla., Oklahoma City.—Board of Education awarded contract at \$14,200 to Western Construction Co., Oklahoma City, to erect addition to Putnam Heights School and at \$13,280 to J. A. McCall to erect addition to Culbertson Heights School.

Tex., Austin.—Swedish Methodist College awarded contract to erect college buildings; cost of first structure about \$75,000; plans by Endress & Walsh, Bosche Bldg., Austin. (Recently noted.)

Tex., Denton.—College of Industrial Arts awarded contract to W. F. Maxey, Denton, to erect president's home. (See "Dwellings.")

Tex., Sabinal.—City awarded contract to S. T. Hutchison, Sabinal, to erect proposed high-school building; four rooms and auditorium; cost \$9000.

Tex., Winnsboro.—Board of Trustees awarded contract to erect school; cost \$12,000.

W. Va., Clendenin.—Big Sandy District School Board, J. R. Davis, secretary, awarded contract July 14 for erection of school building previously noted; two stories and basement; 65x103 feet; brick and stone; tile roof; cost \$20,000; hot-air heat; gas lighting; cement walks; plans by A. G. Higginbotham, Charleston, W. Va. (See "Machinery Wanted.")

STORES

Ala., Mobile.—Waring Harrison, agent for Waring estate, awarded contract to S. E. Dupres & Son to erect store and apartment building; two stories; 129x39 feet; ordinary construction; plans by Hutchison & Chester, Mobile, Ala.; for further information address architects. (Recently noted.)

Ark., Little Rock.—Pugh & Matthews

awarded contract to Thalman & Reed, Little Rock, to erect stores and apartments; three stories; 50x140 feet; fireproof construction; natural-gas heat; gas and electric lighting; cost \$10,000; plans by George R. Mann, Mann Bldg., Little Rock. (Previously noted.)

Ark., Little Rock.—Mathews & Pugh awarded contract to Thalman & Reed, Little Rock, to erect apartment and store building. (See "Apartment-houses.")

D. C., Washington.—B. B. Earnshaw, 1105 11th St. S. E., awarded contract to M. F. Piper to erect store at 1103 S St. S. E.; three stories; brick; cost \$5070; plans by George P. Hales, 306 Bond Bldg., Washington.

Ga., Atlanta.—Hirsch & Spitz will erect store building; cost \$13,000; 50x110 feet; three stories; mill construction; plans by Edwards & Franklin, Atlanta; contract awarded; building will be occupied by G. N. Morris Company.

Ga., Augusta.—Industrial Lumber Co. has contract to erect two-story frame store and residence; cost \$4500.

Ga., Blakely.—H. G. Smith awarded contract to A. J. Ross to erect store building recently mentioned; two stories; 30x100 feet; cost \$8000; electric lighting; cement sidewalks; plans by contractor; materials purchased.

Ga., Ludowici.—C. J. McDonald awarded contract to erect store and hotel building; three stories; brick; lower floor for stores; upper floors for hotel.

Ga., Macon.—Dunlap Hardware Co. awarded contract to J. F. Griffin & Sons to erect store building; five stories; 60x75 feet; brick; cost \$5000. (Previously noted.)

Ga., Macon.—National Biscuit Co. awarded contract to W. J. Marshall & Co. to erect business building; two stories; 50x108 feet; cost \$5000; plans by Curran R. Ellis, Macon, Ga.

Ga., Millen.—T. Z. Daniel awarded contract to erect store, bank, postoffice and hotel building recently noted. (See "Hotels.")

Ga., Sandersville.—H. Paris awarded contract to Holley Bros., Macon, to erect store building; 26x120 feet; two stories; pressed brick; cost \$6500; plans by Frank R. Happ, Macon. (Previously noted.)

Ga., Savannah.—Delmonico Company awarded contract to A. L. Wimlish, Savannah, to remodel store building on Congress St.; plans by H. W. Witcover, Savannah.

Ga., Savannah.—H. H. Peeples awarded contract to E. Morgan, Savannah, to remodel store, converting two structures into one; plans by H. W. Witcover, Savannah.

La., New Orleans.—George A. Thomas will erect business building; two stories; brick; to contain three stores; 34x71 feet each; gas and electric lighting; cost \$4500 each; contract awarded to Charles Hendley.

La., New Orleans.—Lem Fellman awarded contract to George I. Glover to erect building on Canal St. between Baronne and Carondelet Sts.; five stories; white enameled terra-cotta front; fireproof; sprinkler system; elevators; iron staircases; cost \$60,000. (Recently noted.)

Miss., Georgetown.—Oliver & Co. of Hattiesburg, Miss., have contract to erect five store buildings.

Miss., Lucedale.—Oliver & Co. of Hattiesburg, Miss., have contract to erect several stores.

RAILROAD CONSTRUCTION

RAILWAYS

Ala., Birmingham.—The Tidewater & Gulf Railway, says a report, has completed 25 blocks of its line in Ensley and work towards Birmingham is proceeding. Track-laying is well under way. J. M. Dewberry of Birmingham is vice-president.

Ala., Montgomery.—The Warrior-Black Creek Coal Co. of Montgomery, it is reported, will assist in the construction of the Warrior Mineral Railroad from its mines to a connection with a branch of the North & South Alabama Railroad.

Ark., Bigelow.—Reported that the Fourche River Valley & Indian Territory Railroad will be extended to connect with the Kansas City Southern Railroad. Wm. Collins is general manager at Bigelow, Ark.

Ark., Fort Smith.—O. P. Allee writes that the construction proposed by the Fort Smith & Van Buren Railway Co. is only an industrial track about 2½ miles long.

Ark., Marianna.—The report is confirmed that the Missouri Pacific Railway has awarded contract to the List & Gifford Construction Co. of Kansas City for the grading

Miss., Meridian.—Frank Helsa will erect business building; four stories; 65x90 feet; to contain stores and offices; electric passenger elevator; cost \$22,000; plans by P. J. Krouse, Meridian; contract awarded to Alonzo Hancock, Meridian. (See "Machinery Wanted.")

N. C., Winston-Salem.—W. D. Myers and associates of Greensboro, N. C., awarded contract to Ange Construction Co., Winston-Salem, for improvements to Hitchcock-Trotter department store; will erect two additional stories; ordinary construction; steam heat; electric lighting; cement sidewalks; for further information address Hitchcock-Trotter. (Recently noted.)

Tenn., Knoxville.—McClung, Keener & McClung will expend \$60,000 to erect store building; 100 feet by 124 feet 5 inches; five stories; mill construction; heating and lighting let separately; to install sprinkler system; contract recently noted awarded to Brimer & England Bros., Knoxville.

Tenn., Knoxville.—S. R. Wade awarded contract to J. M. Dunn & Son, Knoxville, to erect business building for W. W. Scarborough & Co.; 50x150 feet; three stories and basement; cost \$14,000; plans by R. F. Graf & Sons, Knoxville.

Tenn., Knoxville.—A. Suffridge awarded contract to J. M. Dunn & Son, Knoxville, to erect store building; three stories; brick; 22x66 feet; cost \$6000.

Tex., Portland.—R. J. Stroud awarded contract to erect store building; two stories; frame.

Tex., Taylor.—D. F. Smith awarded contract to Hope Bros. to erect store.

W. Va., Wheeling.—Hub Clothing Co. awarded contract to Bushon & Lehman, Wheeling, to erect arcade to store building, 17 feet from sidewalk; glass and metal construction; cost about \$5000.

THEATERS

Tenn., Knoxville.—Fritz Staub awarded contract to Brimer & England Bros., Knoxville, to remodel theater; ordinary construction; steam heat (use present plant); electric and gas lighting; cost \$10,000; plans by Baumann Bros., 713 Henson Bldg., Knoxville. (Recently noted.)

WAREHOUSES

Ga., Macon.—Jones Grocery Co. awarded contract to W. J. Marshall & Co., Macon, to erect warehouse; one story and basement; 100x125 feet; prepared gravel roofing; mill construction; cost \$10,000; plans by Curran R. Ellis, Macon.

N. C., Durham.—J. R. Green awarded contract to Wilkerson-Moffitt Construction Co., Durham, to erect warehouse; capacity for several thousand hogsheads of tobacco; cost \$5000. (Recently noted.)

Tenn., Knoxville.—E. R. Wads awarded contract to J. M. Dunn & Son, Knoxville, to erect proposed warehouse; 50x150 feet; ordinary construction; electric and hand elevators; cost \$15,000; plans by R. F. Graf & Son, Knoxville. (See "Machinery Wanted.")

Tex., Brownsville.—St. Louis, Brownsville & Mexico Railway, E. C. Burgess, chief engineer, Kingsville, Tex., awarded contract to R. F. Watt, Kingsville, Tex., to erect bonded warehouse; 24x40 feet; fireproof construction; electric lighting; also have fireproof vault; cost \$4500. (Recently noted.)

and pile bridging of the cut-off from Marianna to Bridge Junction, near Memphis, Tenn., a distance of about 46 miles. The Kansas City Bridge Co., Kansas City, Mo., has been given the contract for the foundations of steel bridges on the line. E. F. Mitchell of St. Louis is chief engineer for the railroad. Joyce Bros. & Bagwell of Kansas City are reported to have 250,000 yards of earthwork to sublet; office also at Marianna, Ark.

Fla., Pensacola.—G. A. Berry, chief engineer of the Gulf, Florida & Alabama Railway Co., Blount Bldg., Pensacola, Fla., says that survey is being rapidly pushed with a number of field parties and that the company is about to ask bids for grading the first 20 miles.

Fla., Perry.—Rumored that the Atlantic Coast Line proposes to build a short line from Perry to Monticello, Fla., 40 miles. E. B. Ptasants is chief engineer at Wilmington, N. C.

Fla., Tampa.—R. F. Bettis, Box 518, Tampa, says he has just completed survey for the Mango & Kennedy Hill Railroad to connect the two points named in Hillsborough

county. Dr. J. E. Hitt is president, Mr. Eells engineer in charge and Joe Tawson superintendent of construction. Connects with the Atlantic Coast Line at Mango.

Ga., Adel.—A dispatch says that charter is granted for the Adel, Thomasville & Pavo Railroad Co., previously reported; capital \$200,000. Line to be 45 miles from Adel to Thomasville, Ga. Incorporators: H. H. Tift of Tifton, Ga.; J. Frank Harris, J. A. Kennedy, W. L. Adams, E. M. Smith and W. C. Snodgrass of Thomasville; R. C. Woodward, J. R. Kennon, P. E. C. Williams, A. W. Parrish and J. Z. Jackson of Berrien county, and C. E. Davis of Colquitt county. Mr. Tift is president.

Ga., Macon.—President W. W. Finley of the Southern Railway confirms report that the company will build new freight yard at Macon. A tract 600 feet wide and 7000 feet long south from Turpin St. was purchased, and plans are in preparation to build a modern yard of 750 cars capacity. A team track yard of 80 cars capacity, to be jointly used with the Georgia Southern & Florida Railway, will also be built. W. H. Wells is chief engineer of construction at Washington, D. C.

Ky., Lexington.—Concerning the report that the Lexington & Eastern Railroad would build an extension up Boone's Fork, J. E. Willoughby, engineer of construction, says it is proposed to build some coal spurs on Wrights Fork of Boone to mines which were to be opened by the Consolidation Coal Co., but the location of the spurs is not definitely decided.

Ky., Whitesburg.—J. E. Willoughby, Louisville, Ky., chief engineer for the Lexington & Eastern Railway, will, it is reported, let contract very soon for a further extension of seven miles from Potter Fork to Wright Fork, where the Consolidation Coal Co. will open more mines.

La., New Iberia.—Dispatches say that President F. M. Welch of the Iberia, St. Mary's & Eastern Railroad has been authorized by the directors to award contracts for the construction of the line from New Iberia to Berwick City, on Berwick Bay, opposite Morgan City, 52 miles. Line will run via Jeanerette and other towns. He is quoted saying that all preliminaries are arranged. Subscriptions have been voted to the amount of \$345,000, which includes \$81,000 for the 12 miles from New Iberia to Jeanerette. Besides Mr. Welch the board consists of H. N. Pharr, Iberia; James Peterman, Paul Kramer and Emmett O'Neil of Franklin; Mayor J. M. Durocher of Jeanerette and Porteus R. Burke of New Iberia.

La., New Iberia.—The Southwestern Traction & Power Co., Hennen Bldg., New Orleans, will, it is announced, begin construction within a month on its proposed interurban electric railway from Spanish Lake via New Iberia to Jeanerette, 17 miles, this being the first link of a line to Morgan City, about 66 miles. F. W. Crosby is president and Henry A. Montz vice-president.

La., New Orleans.—President B. L. Winchell of the Frisco system is quoted saying that the Louisiana Southern Railway will be extended 20 miles. P. Campbell is superintendent at New Orleans.

La., New Orleans.—An officer of the Illinois Central Railroad says that its contemplated work in the South includes extension of second track 1.3 miles from Diversion to Curve, Tenn.; completion of 36 miles of main line second track from Ponchatoula to New Orleans, La., and the reduction of grades on 3.6 miles of double track south of McComb, Miss. A. S. Baldwin, Chicago, Ill., is chief engineer.

Md., Brunswick.—The Baltimore & Ohio Railroad has awarded contract to Charles F. King & Co. of Philadelphia to enlarge the yards at Brunswick, Md., by a 10-track gravity yard for making up fast freight trains. F. L. Stuart is chief engineer at Baltimore, Md.

Md., Ebbwvale.—The Central Iron & Steel Co. of Harrisburg, Pa., is reported to have bought the Bachman Valley Railroad, seven miles long, from Ebbwvale to a connection at intersection with the Western Maryland Railroad, and the new owners, it is said, will extend the line to Bachman's Mills and possibly to Westminster, Md., about nine miles.

Miss., Batesville.—Official information is that the Batesville Southwestern Railroad is to be only a logging line about 16 miles long, of very light construction, the grade conforming very closely to the surface of the ground. Work will be done by the concern owning the timber to be gotten out. Address Batesville, Miss.

Mo., Kansas City.—The Union Depot Bridge & Terminal Railroad Co. is reported to have awarded contract to Cameron, McManus &

Joyce of Keokuk, Iowa, to grade five miles of double track electric railroad on the Clay county side of the Missouri River. The Armour-Swift-Burlington interests are said to be concerned.

N. C., Burnsville.—A dispatch says that Burnsville township has voted an issue of \$20,000 of bonds to aid the Black Mountain Railway, which is operated from Galax to Meville, and contemplates extending to Burnsville. J. Bis Ray of Burnsville and others are interested.

N. C., Robbinsville.—The Graham County Commissioners have called an election for August 15 to vote on a proposed issue of \$50,000 of 4 per cent. 20-year county bonds, provided the Graham County Railroad Co. builds a line from a connection with the Southern Railway to Robbinsville, after which the securities are to be delivered to the new railroad company. J. D. Jenkins is chairman of the board.

N. C., Salisbury.—S. B. Hanes of Winston-Salem, says a report, has been appointed chief engineer for the proposed railroad from Salisbury to Monroe, N. C., and President N. B. McAnless is reported saying that construction will probably begin by September 1 from Salisbury to Faith.

Okla., Oklahoma City.—An agreement is reported reached between the Chamber of Commerce and the Missouri, Oklahoma & Gulf Railroad Co. for the contemplated entrance to Oklahoma City, which will require the construction of about 100 miles of new line. Details remain to be settled. William Kenebeck of Kansas City is president and J. J. Harrison of Muskogee, Okla., is chief engineer of the railroad.

S. C., Aledo.—D. W. Alderman, vice-president of the Alico Railroad, writes that it is not definitely decided that an extension to Sumter will be built. The matter is being considered, and if the Seaboard extends there an extension to connect with it at some point may be decided upon.

S. C., Florence.—The South Carolina Western Railway has completed its extension from Darlington to Florence, 10 miles, and is to be operated August 1. W. R. Bonsal is president at Hamlet, N. C.

S. C., Mullins.—The North & South Carolina Railway, says a dispatch, will build an extension from Mullins to Allisons Ferry, about 30 miles south, and Mike Schlitz, contractor, is preparing to begin work on the first five miles out of Mullins. W. R. Bonsal, Hamlet, N. C., is president.

S. C., Spartanburg.—M. J. Caples, vice-president and general manager, Johnson City, Tenn., says, with reference to a late report, that no plans have been made by the company looking to the construction of an extension from Spartanburg to Greenville, S. C., at any time in the near future.

S. C., Ridgeville.—The E. P. Burton Lumber Co., Charleston, S. C., denies report that it contemplates building a railroad from Monck's Corner via Ridgeville to Cottageville, S. C., about 40 miles.

Tenn., Harriman.—The Harriman, Knoxville & Eastern Railroad is reported receiving rails, about 70 per cent. of the grade being done. Tracklaying to begin soon. J. W. Bye of Knoxville has the contract for bridges and trestles. C. E. Hendrick of Harriman is president.

Tenn., Jonesboro.—It is announced that the Legislature has passed the bill authorizing Jonesboro to issue \$25,000 of bonds for the proposed electric railway from Jonesboro and to Johnson City, six miles. W. P. Shipley, secretary of the Jonesboro Board of Trade, invites correspondence from those who may be interested.

Tenn., Memphis.—J. R. Pleasants, secretary of the Lake View Traction Co., writes that the line to be built is 100 miles, from Memphis to Clarksdale, Miss.; route level. J. H. Sullivan is president, Walter Goodman vice-president, P. S. Smithwick treasurer, and J. R. Pleasants secretary at Memphis, Tenn., and M. O. Cramer superintendent at Lakeview, Miss.

Tenn., Paris.—The Tennessee & Kentucky State Line Railroad Co. is reported asking bids for construction of its proposed line from Hazel, Ky., which is on the Tennessee boundary, westward about 15 miles, to develop timber and clay lands; capital \$80,000. J. N. Hill, W. T. Jackson and others of Hazel, as heretofore reported, are the incorporators. Charles C. Tannis is chief engineer at Pittsburg, Pa.

Tex., Brady.—Concerning the report that the Frisco would build an extension from Brady to Mason, Tex., F. G. Jonah, chief engineer of construction, St. Louis, says that a party is in the field retracing the location survey made in 1909 and 1910.

Tex., Dallas.—President J. F. Strickland of the Southern Traction Co. is quoted saying that complete route selected is from Dallas via Hutchins, Wilmer, Ferris, Waxahachie, Forrester, Italy, Milford, Hillsboro, West and Days Lake to Waco, with a branch from Ferris via Ennis and other towns to Corsicana. About 15 miles of right of way have already been secured. Line to Dallas about 100 miles long; branch about 35 miles.

Tex., Jefferson.—The Southern Lumber Co., it is reported, will extend its logging road to reach Jefferson, and also eastward into Louisiana.

Tex., Brady.—A dispatch says that B. F. Yoakum, chairman of the Frisco system, confirmed report of acquisition of the Brownwood North South Railroad, now building from Brownwood, Tex., north; also that he closed an agreement with citizens of Brady to build an extension south from Brady to the San Antonio & Aransas Pass Railway, 100 miles. F. G. Jonah is chief engineer of construction at St. Louis, Mo. A later report says that T. Yates, construction engineer, has opened headquarters at Brownwood to superintend the completion of the North & South Railroad.

Tex., San Antonio.—C. S. Young of San Antonio, it is reported, will make survey for the proposed railroad from San Antonio to a point at or near Brownsville, Tex., running two lines. The San Antonio & Mexican Construction Co. is back of the plan. H. L. Hall is chairman of the committee.

Tex., Wichita Falls.—The report that the Wichita Falls & Northwestern Railway contemplates an extension from Devel via Randall, Okla., to Lawton and Oklahoma City is denied by R. A. Thompson, chief engineer.

W. Va., Blacksville.—A dispatch says that H. F. Stark of Waynesburg has been awarded the contract to build the proposed trolley line from Blacksville to Waynesburg, Pa., eight miles. Construction, it is said, will cost \$1,000,000. T. Sheehan of Shinnston, W. Va., got part of the work.

W. Va., Martinsburg.—The Baltimore & Ohio Railroad proposes to build a four-track viaduct over Burke St. and raise grade within the city two feet; also to raise the

grade at Flags Crossing, two miles east, 15 feet and build a four-track viaduct. P. L. Stuart, Baltimore, is chief engineer.

W. Va., Morgantown.—Further particulars about the Morgantown Interurban Railway Co., just incorporated, say that it is proposed to build from Fairmont, W. Va., via Morgantown to Point Marion and Waynesburg, Pa., and that the first section to be constructed will be from Morgantown to Point Marion, for which surveys are completed. The incorporators are Col. Joseph H. McDermott, Senator Davis Elkins, H. B. Warfield and John A. Purinton of Morgantown, W. Va. Colonel McDermott is president and treasurer.

STREET RAILWAYS

Ark., Fort Smith.—The Fort Smith Light & Traction Co. has announced plans for building extensions upon the South Side and amounting to about 10 miles of track. J. W. Gillette is general manager.

Fla., Pensacola.—The Pensacola Electric Co., says a dispatch, announces that it will immediately build an extension to the new baseball park in the western section.

Ga., Waycross.—The Waycross Street & Suburban Railway Co., writes George W. Deen, one of the petitioners for charter, proposes to build 10 or 12 miles of line in Waycross first, without bonding, and after this it is to build suburban lines. Engineer not engaged nor is contract let. Company will be organized about August 1. Mr. Deen has the franchise.

Mo., Jefferson City.—The Jefferson City Street Railways Co., says a telegram, which has just completed its line into the eastern suburbs, will make extensions to the west, probably to the Country Club, five miles.

N. C., Greensboro.—The Robertson Construction Co. of Charlotte, N. C., is grading about 1½ miles of extension from Lindley Park to Terra Cotta for the North Carolina Public Service Co.

Tex., Temple.—A deal is reported closed for an extension of the Temple Street Railway through the Talcoe addition on the South Side, two miles.

MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Air Compressor.—Goodlett Gln Co., Goodlett, Tex., wants air compressor.

Aluminum Manufacturers.—Wm. A. Fidwell, Lucama, N. C., wants to correspond with aluminum manufacturers relative to contracting for buggy shaft catch in quantities.

Automobiles.—Chamber of Commerce, A. V. Snell, secretary, Sumter, S. C., wants to correspond with manufacturers of "auto buses" or "street-car autos."

Baling Presses.—Frank Huart, 208 W. Fifth Ave., Knoxville, Tenn., wants to correspond with manufacturers of baling presses for waste paper.

Bank Fixtures.—King Lumber Co., Charlottesville, Va., wants prices on bank fixtures.

Bank Fixtures.—Bank of Colfax, Colfax, La., wants prices on bank fixtures.

Bank Fixtures.—C. E. Moore, Argenta, Ark., wants bank fixtures.

Belts.—Monson Manufacturing Co., Jarratt, Va., wants quotations on four-inch and five-inch second-hand single and double leather belts.

Boilers.—See "Engines and Boilers."

Boilers.—Office Commissioners, District of Columbia. Proposals received until 2 P. M. July 24 for replacing two condemned boilers in basement of Eastern High School No. 85, 7th and C Sts. S. E., Washington, D. C. Specifications and information may be obtained from chief clerk, Engineer Department, Room No. 427 District Bldg.

Brewery Equipment.—Lauro M. Guerra y Compania, Apartado Postal 540, Mexico City, Mex., want to buy small second-hand brewery installation.

Bridge.—Proposals, together with competitive plans and specifications, will be received at Courthouse, Benton, Tenn., until noon August 5 for construction of highway

bridge across Hawassee River at Reliance, Tenn.; bids are to include furnishing, delivering and erecting complete of steel superstructure, concrete piers and abutments and earthen embankments; width of roadway, 18 feet; steel to be designed according to Cooper's specifications for Class D highway bridges; bidders are to visit site and secure necessary profiles or surveys. Further information may be obtained from J. N. McBrayer, chairman of committee, Reliance, Tenn.

Bridge Construction.—M. M. Spiars, County Clerk, Mayersville, Miss., receives bids until noon August 7 for repairing and placing new draws in all bridges in Issaquema county now over Steel's Bayou; plans and specifications on file in clerk's office. (Date of opening bids postponed from July 3.)

Bridge Construction.—D. M. Ausley and Isadore Wallace of Statesville, N. C., and Osborne Brown, Long Island, N. C., committee Statesville-Buffalo Shoals Bridge Co., want bids on bridge across Catawba River at Buffalo Shoals, N. C.

Bridge Construction.—Proposals are invited by Commissioners of Roads and Revenues of Hancock county, Sparta, Ga., for steel highway bridge 110 feet long, 16 feet wide in the clear, to be erected over Little Buffalo Creek; county will build masonry piers 110 feet in the clear and haul bridge material to site; bids are to cover materials and erection of steel portions, omitting wooden floor, and each be accompanied by drawings and specifications showing type of bridge, sizes of members, total weight, guarantee of safe strength under 100 pounds per square foot distributed load and under 15,000 pounds concentrated wagon load; drawings and specifications are to be submitted for approval of C. M. Strahan, professor civil engineering, University of Georgia, Athens, Ga.; bids are to be opened at commissioners' office August 3; W. E. Wiley, clerk.

Bridges.—Otto P. Stallings, 410½ Franklin St., Tampa, Fla., wants names and addresses of bridge manufacturers and contractors.

Bridges.—P. St. J. Wilson, State Highway Commissioner, Richmond, Va., receives bids until July 28 for construction of two steel bridges in Spottsylvania county; plans and specifications on file at office of County Clerk.

Bridges.—Proposals received by Supervisors of Grenada County, Grenada, Miss., until noon August 7 for furnishing material and constructing six reinforced concrete bridges; plans and specifications on file with chancery clerk; certified check 5 per cent. of proposal; John S. King, Chancery Clerk; Albert T. Witbeck, County Engineer.

Bridges.—See "Road Construction, etc."

Bronze.—King Lumber Co., Charlottesville, Va., wants prices on ornamental bronze.

Brush-back Machinery.—See "Woodworking Machinery."

Building Materials.—Walter T. Pippin, Chestertown, Md., wants prices on mill work, lumber, hardware, painting, slate roof, etc.

Building Materials.—Thomas Wilson, St. Luling, Tex., wants prices on lumber, tin roof, plate glass, mill doors and frames, steel columns, girders, beams and metal sills.

Building Materials.—Charles E. McCray, Jr., 226 Main St., Fairmont, W. Va., wants prices on store fronts, pavement glass, metal covering, marble and interior marble, floor and wall tiling, brass rails and chandeliers.

Building Materials.—J. R. Davis, Secretary School Board, Clendenin, W. Va., wants prices on building materials for \$20,000 brick and stone schoolhouse.

Building Materials.—Elmer Coon, Braggs, Okla., wants prices on electric supplies, metal ceiling, etc., for \$18,000 bank, store and hotel building.

Button Machinery.—E. M. Turner, assistant city engineer, Shreveport, La., wants to correspond with manufacturers of pearl-button machinery.

Canal Construction, etc.—F. S. Shields, secretary, receives bids at office of Sewerage and Water Board, City Hall Annex, New Orleans, La., until noon September 11 for construction of Napoleon Ave. system of drainage canals and pipe lines; work will consist mainly of 255,000 cubic yards excavation, 53,000 cubic yards reinforced concrete and 73,000 linear feet 36-inch to 6-inch terra-cotta pipe lines; specifications with blank proposal forms and general plans may be obtained upon application at office of board; certified check \$10,000; George G. Earl, general superintendent.

Canal Excavating.—Proposals received by Drainage Commissioners of State, J. C. Luning, secretary, Tallahassee, Fla., until 10 A. M. August 10 for excavating three drainage canals on east coast near Pompano, Fulford and Larkin; total length of canals, 16 miles; bottom width, 25 feet; mean depth, 6 feet; require excavation of about 400,000 cubic yards earth and 200,000 cubic yards rock; specifications and blank proposal forms can be obtained by application to J. O. Wright, chief drainage engineer, Tallahassee.

Canning Machinery.—H. C. Sahlmann, Joplin, Mo., wants information and prices on canning equipment for fruits, vegetables, catsup and kront.

Cars.—Proposals received by District Commissioners, Washington, D. C., until 2 P. M. July 25 for furnishing 127 steel cars for brick-making plant at D. C. Workhouse. Form of proposal and specifications may be obtained from purchasing officer.

Cars.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on logging cars.

Core Machine.—See "Mining Machine, etc."

Concrete Piling.—Sealed proposals addressed to Commissioners of Roads and Revenues, Atlanta, Ga., received until noon August 10 for furnishing material and labor required for concrete piling in various acceptable methods to receive piling caps, columns, etc., for building 130x220 feet, consisting of sub-basement, basement and nine stories, all described in plans and specifications for courthouse, on file for inspection at office of commissioners and of associate architects, A. Ten Eyck Brown and Morgan & Dillon, 607 10 Forsyth Bldg., Atlanta. (See "Courthouses" under "Buildings Proposed.")

Cranes.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on cranes.

Crematory.—E. A. Poe, chairman of sanitary committee, Fayetteville, N. C., wants data and prices on crematory for trash.

Crossfiles.—See "Electrical Machinery, etc."

Crusher.—Eastern Railway Supply Co., 414 American Bldg., Baltimore, Md., wants 150-ton steam crusher complete with elevator.

Dam.—City of Fort Worth, Tex., will receive sealed bids until September 5 for construction of dam containing about 300,000 cubic yards of earthwork and 60,000 cubic yards of masonry; also concrete pipe line about 6½ miles long; details on application to Board of Engineers, City Hall.

Doors.—C. P. Payne, Enterprise, Ala., wants wood rolling doors for church; specifications on application.

Dredge Bucket.—Eastern Railway Supply Co., 414 American Bldg., Baltimore, Md., wants three-quarter-yard orange-peel bucket.

Earthwork.—Mississippi River Commission, First and Second Districts, U. S. Engineer Office, Custom-house, Memphis, Tenn. Sealed proposals for constructing about 250,000 cubic yards earthwork in lower St. Francis levee district received until 11 A. M. August 1, and then publicly opened. Information on application. Clarke S. Smith, Major, Engineers.

Electric Generator.—W. A. Guenther & Sons, 224 Frederica St., Owensboro, Ky., want prices on 50-kilowatt 110-volt 60-cycle alternating-current generator.

Electric Plants.—Charles E. McCray, Jr., 226 Main St., Fairmont, W. Va., wants prices on electric-light plant.

Electric-Light Plant.—Smithfield Water Co., B. P. Gay, general manager, Smithfield, Va., considering electric-light plant for 1400 population; may require 100-horse-power engine or two 50-horse-power engines, each with producer of 125 horse-power.

Electric-Light Plant.—Hines Buggy Co., Boykins, Va., wants estimates on 12-horse-power gasoline engine, dynamo, switchboard, tank for 3000 gallons water and pump.

Electric Motors.—Southwestern Showcase Manufacturing Co., J. M. Brown, president, 21 N. Orchard St., Oklahoma City, Okla., wants prices on 32-horse-power motors; also 5-horse-power motor.

Electric Motors.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on electric motors.

Electrical Machinery, etc.—Turbo-generator unit, road roller, hose and cross-ties. Sealed proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10:30 A. M. August 4, then opened in public, for furnishing above-mentioned articles. Blanks and general information relating to circular No. 640 may be obtained from this office or offices of assistant purchasing agents at 24 State St., New York, 614 Whitney-Central Bldg., New Orleans, and 1086 Point St. San Francisco; also from U. S. Engineer offices in Seattle, Los Angeles, Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, and Chamber of Commerce and Board of Trade, Tacoma. F. C. Boggs, Major, Corps of Engineers, U. S. A., General Purchasing Officer.

Electrical Machinery, etc.—Sealed proposals received at office of General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., not later than 10:30 A. M. August 4, and then opened, for furnishing, by steamer, free of all charges, on dock at either Colon (Atlantic port) or Port of Ancon (Pacific port), the following articles: Turbo-generator unit, road roller, hose and cross-ties. Copies of this circular (No. 640) may be obtained from this office or offices of assistant purchasing agents, 24 State St., New York; 614 Whitney-Central Bldg., New Orleans, and 1086 North Point St., San Francisco; also from U. S. Engineer offices in Baltimore, Philadelphia, Pittsburgh, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Milwaukee, St. Paul, Chattanooga, Louisville, Mobile, Galveston, Seattle and Los Angeles; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill.; Chamber of Commerce and Board of Trade, Tacoma, Wash., and Chamber of Commerce, Portland, Ore.

Electric Supplies.—See "Building Materials."

Elevators.—J. M. Dunn & Son, Knoxville, Tenn., want bids on electric and hand elevator.

Elevator.—Frank Heiss, Meridian, Miss., wants prices on electric passenger elevator.

Engine.—See "Woodworking Machinery, etc."

Engine.—Roanoke Steam Laundry, 333

Salem Ave., Roanoke, Va., wants prices on 25-horse-power compound Corliss engine. (See "Laundry Machinery.")

Engine and Boiler Trimmings.—Goodlett Gln Co., Goodlett, Tex., wants boiler and engine trimmings—heater, boiler feed and pump; also air compressor, etc.

Engines and Boilers.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on engines and boilers, 75 horse-power; also gas and gasoline engines.

Excavation.—City Council, Cedartown, Ga., will receive bids until 10 A. M. August 4 for excavating Cemetery Hill on East Ave.; plans and specifications on file with H. N. Van Devander, City Engineer; certified check \$500; M. D. Russell, Mayor.

Fertilizer Machinery.—Farmers' Union Warehouse Co., Horace Hicks, secretary, Ashford, Ala., will receive bids September 1 on machinery for guano-mixing plant.

Fertilizer Machinery.—E. O. Painter, president E. O. Painter Fertilizer Co., Jacksonville, Fla., will want fertilizer-mixing machinery.

Filling Machinery.—See "Weighing Machinery, etc."

Fire-escapes.—Charles E. McCray, Jr., 226 Main St., Fairmont, W. Va., wants prices on fire-escapes.

Fireproofing.—Sealed proposals addressed to Commissioners of Roads and Revenues of Fulton county, Atlanta, Ga., received until noon August 10 for furnishing material and labor required for the fireproofing of all interior structural-steel columns, beams, floor arches for a building covering 130x220 feet, consisting of sub-basement, basement and nine stories, all described in plans and specifications for courthouse, on file at office of commissioners and of associate architects, A. Ten Eyck Brown and Morgan & Dillon, 607 10 Forsyth Bldg., Atlanta. (See "Courthouses" under "Buildings Proposed.")

Flooring.—Sealed bids received at office of Board of County Commissioners, Richmond county, Augusta, Ga., until 12 M. August 15, and then opened, for evening floors of corridors of courthouse and laying same Nonpareil cork tiling; plans and specifications may be had by applying at office of County Commissioners or architect, Louis F. Goodrich; usual rights reserved; E. P. Verdery, chairman; Jas. T. Gardiner, clerk.

Furniture, etc.—Charles E. McCray, Jr., 226 Main St., Wheeling, W. Va., wants prices on linoleum, carpets, portieres, etc.

Gas and Gasoline Engines.—See "Engines and Boilers."

Gasoline Engine.—J. E. Leps, Keyser, W. Va., wants 10 to 15-horse-power engine for air ship; second-hand preferred.

Gasoline Engine.—See "Electric-Light Plant."

Gravel.—See "Sand and Gravel."

Handle Machinery.—George E. Searing, Shushan, N. Y., wants wood-handle machinery.

Heater.—See "Engine and Boiler Trimmings."

Heating Plant.—Bids for installation of steam-heating plant in high school will be received by Mayor and Board of Aldermen, Lecompte, La., until 8 P. M. August 1; J. R. Moore, Mayor.

Heating Plant, etc.—Proposals will be received at office of business director Board of Education, Administration Bldg., 8th and Chestnut Sts., Louisville, Ky., until 3 P. M. July 28 for erection and completion of addition and installation of extension to heating and ventilating plant at George Rogers Clarke School, Payne and Galt Sts., in accordance with plans and specifications by Hermann Wischmeyer, architect, Kenyon Bldg.; for general conditions, certified check, bond, etc., see specifications; plans and specifications can be obtained on application to architect; Samuel D. Jones, business director; Hermann Wischmeyer, architect.

Heating Plant, etc.—Proposals will be received at office of business director of Board of Education, Administration Bldg., 8th and Chestnut Sts., Louisville, Ky., until 3 P. M. July 28 for installation of heating and ventilating apparatus at girls' high-school building, 5th and Hill Sts., in accordance with revised plans and specifications by Mason Maury, architect, Board of Trade Bldg.; for general conditions, certified check, bond, etc., see specifications; plans and specifications can be obtained on application to architect; Samuel D. Jones, business director; Mason Maury, architect.

Heating Plant.—U. G. Lichler, Buckner, Mo., wants prices on installation of low-pressure gravity return steam-heating plant.

Heating Plants.—Charles E. McCray,

Jr., 226 Main St., Fairmont, W. Va., wants prices on heating plants.

Heating Plant, etc.—School Board of Durant, Okla., S. A. Whale, president, will receive bids until 5 P. M. July 25 for installation of steam-heating and ventilating apparatus for four schools; certified check for \$1000; plans and specifications at office of president of board at Durant, Lang & Witchell, architects, Wilson Bldg., Dallas, Tex., and from John King, care Lang & Witchell, Greenville, Tex.

Hoisting Engines.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on hoisting engines.

Ice Machinery.—Southern Ice & Coal Co. (Jesse H. Hall to be addressed), American National Bank Bldg., Macon, Ga., will receive bids on 50-ton ice plant.

Ice Machinery.—Milledgeville Ice Works, Milledgeville, Ga., wants proposals on ice machinery for complete plant; 25 to 40 horse-power.

Ice and Cold Storage.—Crystal Ice & Power Co., D. A. Overby, president, Danville, Va., wants information relative to cold storage and ice-making.

Iron Bars.—L. E. Harris, Westernport, Md., wants prices on 500 round bars of iron 5 feet long by 1¼ inches; one-half-inch hole through center from end to end.

Labeling Machinery.—Duyvene De Wit & Co., Heerengracht 158, Amsterdam, Holland, want to represent manufacturers of labeling machinery; commission basis.

Laundry Machinery.—Roanoke Steam Laundry, 333 Salem Ave., S. W., Roanoke, Va., wants prices on equipment, including 25-horse-power compound Corliss engine, four 36x48-inch wood-cylinder washers, new or second-hand, flat-work ironer, conveyor dry-room, collar-shaping machines, tanks, etc., for water heating, shaftings, hanger, belts, pulleys, valves, pipe, etc.

Levee Construction.—Board of State Engineers, New Orleans, La., receives bids until noon July 26 for construction of Belair levee, West Baton Rouge parish, 1500 feet long and contain 50,000 cubic yards; deposit required, \$300; also for construction of Levert levee, Iberville parish, about 7500 feet long and contents about 240,000 cubic yards; deposit, \$700; all work on right bank of Mississippi River; will be under supervision of Commissioners of Atchafalaya Basin Levee District, Port Allen, La.

Levee Work.—Mississippi River Commission, First and Second Districts, U. S. Engineer Office, Custom-house, Memphis, Tenn. Proposals for constructing about 250,000 cubic yards of earthwork in lower St. Francis levee district will be received until 11 A. M. August 1. Information on application. Clarke S. Smith, Major, Engineers.

Locomotives.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on locomotives.

Macadamizing.—Anne Arundel County Commissioners, Annapolis, Md., receive bids until 11 A. M. August 1 for grading and surfacing with macadam Patapsco Ave., in Brooklyn, Md., from 1st St. to Pennington Ave., one mile; plans and specifications on file with County Commissioners and State Road Commission, Baltimore, Md.; plans and specifications may be secured from State Road Commission upon payment of \$2; bids to be on forms provided; E. T. Hayman, road engineer; S. O. Tilghman, clerk. (Date of opening bids postponed.)

Manufactures.—M. Kohan, Galatz, Moldavia, Roumania, wants to represent American manufacturers.

Manufactures.—Ernst Bunge, 124 Boulevard De Strasbourg, Havre, France, wants to correspond with manufacturers and exporters relative to purchases in carload lots; wants data on all kinds of produces suitable for French markets.

Manufactures.—D. E. Peiper, Robbins, Tenn., wants stock of 5 and 10-cent goods; invites manufacturers and dealers to correspond.

Mining Machine, etc.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. July 25, and publicly opened immediately thereafter, to furnish at navy-yard, Norfolk, Va., centrifugal sand-mixing machine, pneumatic tripod sand shakers and core-making machine. Applications for proposals should refer to schedule 3748. Blank proposals furnished upon application to navy pay office, Norfolk or to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Metal Ceiling.—See "Building Materials."

Moving-picture Films.—Emil Cohn, 30 Markgrafen St., Berlin, S. W., Germany,

wants to represent manufacturers of moving-picture films.

Naval Supplies.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. July 25, and publicly opened immediately thereafter, to furnish at navy-yard, Washington, D. C., etc., quantity of naval supplies as follows: Schedule 3760, air hose, vitribestos pipe covering; schedule 3761, ships' telescopes and mounts. Applications for proposals should designate schedules desired by number. Blank proposals furnished upon application to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Packing.—Pan-American Trading & Supply Co., 10 Cristo St., San Juan, P. R., wants to represent manufacturers of asbestos packing with wire insertion, rubber packing and other similar products.

Paper-bag Machinery.—Duyvene De Wit & Co., Heerengracht 158, Amsterdam, Holland, want to represent manufacturers of paper-bag machinery; commission basis.

Paving.—City Council, Benwood, W. Va., will receive bids until July 24 for paving 1st St. from Jacob to Water St.; plans, specifications and bidding sheets on file with City Clerk or C. C. Smith, Reilly Bldg., Wheeling, W. Va.; Paul A. Dechan, City Clerk.

Paving.—B. L. Peach, City Clerk, Altus, Okla., will receive bids until 9 A. M. July 24 for paving Main St. with bitulithic on five-inch concrete base; Portland cement curb and gutter; Warren Bros. of Boston, Mass. (owners of patents and processes covering making of bitulithic), have agreed to furnish right to construct pavement; certified check \$1000; Blair L. Boyle, City Engineer.

Paving.—Bids received at office of L. H. Baker, secretary-treasurer, Shreveport, La., until 10 A. M. July 27 for 20,000 square yards of brick, 50,000 square yards of wood block, 53,000 square yards of sheet asphalt, 60,000 square yards of asphaltic concrete, 40,000 square yards of bitulithic and 10,000 square yards of concrete paving; plans and specifications in office of City Engineer; usual rights reserved.

Paving Materials.—Office of Commissioners District of Columbia, Washington. Proposals will be received until 2 P. M. July 25 for furnishing bituminous binding material for use in constructing bituminous macadam roads in the District of Columbia. Form of proposal and specifications may be obtained upon application to Purchasing Officer, D. C.

Paving, etc.—Charles R. Kennedy, Comptroller, New Orleans, La., will receive bids until 11 A. M. July 24 for installing subsurface drains, culverts, curbs, gutter bottoms and sidewalk pavements on St. Charles St. from Poydras to Gravier St.; plans and specifications on file with City Engineer; deposit \$50 with City Treasurer; blank proposal forms furnished by City Engineer.

Paving.—Ed. D. Bass, chairman Hamilton County Road Commissioners, Hamilton Bank Bldg., Chattanooga, Tenn., will receive bids until 1 P. M. July 19 for vitrified brick or bituminous macadam pavement, curbing, gutters, drainage and grading on Main St. and George Ave.; for improving Main St. and Georgia Ave. between Chattanooga corporation line at Chattanooga Ave. on Whiteside St. to Willow St., for construction of vitrified brick, bituminous concrete or bituminous macadam roadway, with concrete curb and gutters; plans, specifications and blank form of proposal can be obtained at office of commissioners or furnished on application to responsible prospective bidders; certified check \$500; bond of one-half of cost of work required.

Paving, etc.—Charles R. Kennedy, Comptroller, New Orleans, La., will receive bids until 11 A. M. July 24 for repaving with small granite blocks, installing subsurface drains, culverts, curbs, gutter bottoms and sidewalk pavement on Poydras and Lafayette Sts. from Delta St. to Dock Board's granite block roadway pavement; plans and specifications on file with City Engineer; deposit \$50 with City Treasurer; City Engineer to furnish bidders with blank form of proposal.

Paving, etc.—Board of Affairs, Bluefield, W. Va., will receive bids until 7:30 P. M. July 28 for grading, macadamizing and curbing South Bland St. from end of present brick paving to Bowyer St.; plans and specifications on file with City Engineer; bids for grading, paving and curbing to be made separately; J. T. Akers, Auditor.

Paving.—Street committee (John J. Price, chairman), Frostburg, Md., will receive bids at office of City Clerk until 2 P. M. July 31 for grading and paving 450 feet of Broadway, 200 feet of Mechanic St. and 500 feet of Water St.; separate bids to be submitted for each street; certified checks \$100, \$50 and \$100, respectively; plans and specifications on file with William Harvey, City Engineer.

Paving.—City Council, Brownsville, Tex., will receive bids until noon August 15 for furnishing labor and material for construction of about 27,500 square yards of street paving; bids to be made on brick, creosoted wood block and bitulithic; certified check \$1000; plans and specifications on file with City Clerk and City Engineer; copies will be forwarded upon receipt of \$5; Benj. Kowalski, Mayor; L. B. Puente, City Clerk.

Paving.—M. C. Wilson, Mayor, Hammond, La., will receive bids until August 10 for construction of 6½ miles of concrete sidewalks; certified check \$200; for specifications and further information address City Engineer.

Piping.—Sealed proposals received by Water-works Commissioner, Corpus Christi, Tex., until 4 P. M. August 4 for cast-iron pipe as follows: 195 tons 10-inch cast-iron pipe, "Class C," weight 70 pounds per foot; 42 tons 6-inch cast-iron pipe, "Class B," weight 33 pounds per foot; 12 tons 4-inch cast-iron pipe, "Class B," weight 21 pounds per foot; right reserved to increase or decrease quantity 10 per cent. on 6-inch and 4-inch pipe; 10-inch pipe to be delivered at Calallen, Nueces county, Texas, and 4-inch pipe to be delivered at Corpus Christi; bids to be addressed to John J. Uehling, Water-works Commissioner; usual rights reserved.

Piping.—John H. Trant, Jr., Law Bldg., Norfolk, Va., will probably want 48-inch pipe line.

Piping, etc.—Sealed proposals received by Commissioners of Public Works, Alken, S. C., until 4 P. M. July 31, and then opened, for laying about 6¼ miles of 14-inch cast-iron water pipe and supplying of sundry materials; certified check \$250; successful bidder must make contract in accordance with specifications; plans and specifications can be seen at office of engineer, Harry Sudlow, at Alken; bidders may obtain copy of plans by depositing check for \$10, returned upon return of plans in good condition.

Piping.—City of Enid, Okla., wants about 400 feet of 18-inch cast-iron pipe and 16 cast-iron tees with 6-inch outlet; C. L. Burlbank, City Engineer.

Piping.—Proposals received by Water and Light Committee, Brownsville, Tex., until 3 P. M. August 1 for following pipe for water extensions: 1800 feet 4-inch pipe; 5330 feet 6-inch pipe; 3420 feet 8-inch pipe; 7240 feet 12-inch pipe; bids considered on both cast iron and wood pipe constructed for a 250-foot head; bids filed with C. H. More, chairman of committee; E. L. Burks, superintendent water and light plant.

Piping and Valves.—Sealed proposals addressed to Board of Awards received at office of City Register, City Hall, Baltimore, Md., until 11 A. M. July 26 for installing discharge piping and valves in sewage pumping station; plans on file in office of Calvin W. Hendrick, chief engineer of Sewerage Commission. Specifications and plans can be obtained upon application at office of commission, Room 904 American Bldg., on and after July 15; charge of \$5 made for each specification and blueprint; this charge refunded upon return, on or before July 26, of unused specification and plans in good condition, or upon return of general specifications and plans, in case a bid is submitted; certified check of bidder for \$1500 required with each bid; approximate quantities, 800 cubic yards earth excavation; 63 tons C. I. bell-and-spigot pipe and specials; 40 tons C. I. flanged pipe and specials; 2 42-inch Venturi meters; 60 cubic yards concrete masonry; 145 square yards waterproofing; 8 42-inch electrically-operated gate valves; 6 6-inch gate valves; 21 M feet B. M. sheeting left in place; successful bidder required to give bond and comply with City Charter.

Plov.—Pennsylvania Equipment Co., Broad St. and South Penn Sq., Philadelphia, Pa., wants second-hand mold-board plov (left-hand side) to plov for Hart cars.

Pump.—See "Engine and Boiler Trimmings."

Pumps.—John H. Trant, Jr., Law Bldg., Norfolk, Va., will probably want two large electrical pumps.

Rails.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on steel rails.

Reinforced Concrete.—Sealed proposals addressed to Commissioners of Roads and Revenues, Atlanta, Ga., received until noon August 10 for furnishing material and labor required for reinforced concrete frame work, consisting of columns, girders, beams, floor slabs and pile caps for building 130x220 feet, consisting of sub-basement, basement and nine stories, all described in plans and specifications for courthouse, on file at office of commissioners and of associate architects, A. Ten Eyck Brown and Morgan & Dillon,

607-10 Forsyth Bldg., Atlanta. (See "Courthouses" under "Buildings Proposed.")

Reservoir Construction, etc.—W. D. Davis, Mayor, and Board of Commissioners, Fort Worth, Tex., will receive bids until 10 A. M. September 5 for furnishing (a) labor, tools and materials necessary to construction of impounding and storage reservoir on West Fork of Trinity River, about six miles northwest from city; dam will require about 300,000 cubic yards of wetted and rolled embankment and about 60,000 cubic yards of cycloplan concrete; earth work and concrete work may be separately awarded; also (b) construction of reinforced concrete gravity conduit 40 inches internal diameter, about 6½ miles in length, from reservoir to pumping station; plans and specifications on file at Board of Engineers' office, City Hall, on and after July 25, and full sets will be mailed prospective bidders on receipt of \$25; certified check \$20,000, payable to J. J. Nunnally, City Auditor, to accompany bid on reservoir, or bidders' surety company bond \$40,000 to city of Fort Worth; certified check \$5000, payable to J. J. Nunnally, City Auditor, to accompany bid on conduit, or bidders' surety company bond \$10,000, to city of Fort Worth; W. D. Davis, Mayor; J. D. Trammell, John B. Hawley, T. U. Taylor, Board of Engineers; W. J. Estes, City Secretary.

Road Construction.—Elmore County Commissioners, Wetumpka, Ala., will receive bids until noon July 24 for about 24 miles of sand, clay and gravel road construction; begin Jackson Ter. and Central Rd.; plans and specifications on file with County Engineer July 20; will also receive bids until noon August 1 for about eight miles of sand clay road construction; begin Robinson's Springs and River Bridge Rds.; plans and specifications on file with County Engineer July 20; C. L. Strange, County Engineer.

Road Construction, etc.—Bids received up to noon August 7 for grading, graveling, construction of culverts and bridges on about 28 miles of roads; plans and specifications at office of P. T. Myers, engineer, Brookhaven, Miss.; certified check \$1000; gravel obtained from local pits; roads surfaced 14 and 9 feet; about 110,000 cubic yards grading; 168,500 square yards gravel surface; 800 yards concrete and 1600 linear feet vitrified pipe; H. Cassidy, chairman Highway Commissioners, District No. 1, Lincoln county.

Road Machinery.—See "Electrical Machinery, etc."

Road Rollers.—Eastern Railway Supply Co., 414 American Bldg., Baltimore, Md., wants two 10-ton road rollers.

Safe, etc.—First State Bank, S. A. McCulston, president, Pattonville, Tex., wants prices on safe, vault and bank fixtures.

Safes.—C. E. Moore, Argenta, Ark., wants screw door safes.

Sand and Gravel.—Weber Chimney Co., 209 State St., Chicago, Ill., wants sand and gravel at various locations in South; now needs quantities at Macon, Ga., and Jackson, Miss.

Saw.—Roanoke Iron Works, Roanoke, Va., in market for second-hand cold saw to cut off round, square and other shaped stock up to six inches.

Sawmill.—B. G. Binings Lumber Co., Turin, Ark., will open bids August 15 on machinery for plant to be rebuilt at Sheridan, Ark.; daily capacity 1500 feet.

Sawmill, etc.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on band-saw mill, edgers, trimmers, lath mill, hog machine, chains, etc.

Sewer construction Machinery.—John M. Zimmerman, Yale, Va., wants description, catalogues and prices on sewer-construction machinery.

Sewer Construction.—City of Norton, Va., will receive bids until 4 P. M. July 24 for completion of sewer system; construct about 6¼ miles of sewers, ranging from 6 to 18 inches; plans and specifications prepared by Wingate & McGhee, Roanoke, Va.; Scarborough & Dotson, Norton, Va., engineers in charge; John Roberts, Mayor.

Sewer Construction.—Proposals will be received by Sewerage Commission, W. M. McMillan, chairman, Clinton, S. C., on August 21, publicly opened and read at 3 P. M., for construction of sanitary pipe sewers; work embraces nine miles of sewers 8 to 12 inches, and two settling tanks; plans and specifications may be obtained from engineers on deposit of \$10; certified check for 5 per cent.; S. W. Sumner, clerk; the J. B. McCrary Company, engineer, 1311-15 Empire Bldg., Atlanta, Ga.

Sewer Construction.—City Commissioners, Huntington, W. Va., will receive bids until 1 P. M. August 7 for laying 12-inch vitrified tile sewer in four alleys and 15-inch

in one alley; also 12 and 18-inch vitrified tile sewer in Railroad Ave.; plans and specifications on file in City Engineer's office; certified check \$500; John Coon, Commissioner of Streets; A. B. Maupin, City Engineer.

Sewer Construction.—City of Lubbock, Tex., F. E. Wheelock, Mayor, opens bids August 14 on sewerage plant, disposal plant, septic tanks.

Sewer Construction.—See "Canal Construction, etc."

Sewer Construction.—Chapel Hill, N. C., will receive bids until 3 P. M. July 24 for building about three miles pipe sewer, 8 to 10 inches in diameter; plans and specifications on file with S. L. Herndon, chairman, and Gilbert C. White, engineer, Durham, N. C.

Sewers.—Sealed proposals addressed to Board of Awards will be received at office of City Register, City Hall, Baltimore, Md., until 11 A. M. July 26 for constructing sanitary lateral sewer in alley west of Park Heights Ave., north of Fifth Ave.; plans on file in office of Calvin W. Hendrick, chief engineer of Sewerage Commission. Specifications and plans can be obtained upon application at office of Sewerage Commission, Room 904 American Bldg., on and after July 12; a charge of \$2 made for each specification and blueprints; charge refunded upon return, on or before July 26, of unused specification and plans in good condition, or upon return of general specifications and plans, in case a bid is submitted; certified check of bidder for \$75,000 required with each bid; approximate quantities, 530 linear feet 8-inch terra-cotta pipe sewer; 160 linear feet 6-inch terra-cotta pipe house connections; 25 linear feet standard manholes; successful bidder to give bond and comply with City Charter.

Sewerage Work.—Prison Commissioners, Ell H. Brown, Jr., chairman, State Capitol, Frankfort, Ky., will receive bids until noon August 1 for construction of septic tank and filter bed system of sewage disposal at Kentucky Houses of Reform at Greendale, Ky.; plans and specifications on file with board and with engineers, Crawford & Shanklin, Lexington, Ky.; blank proposal form obtainable on request from above; certified check \$500.

Shakers.—See "Mining Machine, etc."

Shafting and Pulleys.—See "Woodworking Machinery, etc."

Sign Standards.—Chamber of Commerce, H. E. Mathews, secretary, Huntington, W. Va., in market for street sign standards; suitable to attach names of streets and avenues.

Siphons.—Robertson Construction Co., Charlotte, N. C., wants prices on five-inch siphons for flush tanks.

Steel Settees.—D. H. Jones, superintendent of Victory Manufacturing Co., Fayetteville, N. C., wants four steel settees.

Steel Plate, etc.—Proposals received at Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until 10 A. M. July 25, and publicly opened immediately thereafter, to furnish at navy-yard, Charleston, S. C., quantity of steel plate and angles. Applications for proposals should refer to schedule 3763. Blank proposals furnished upon application to navy pay office, Charleston, or to bureau. T. J. Cowie, Paymaster-General, U. S. N.

Structural Steel.—Sealed proposals addressed to Commissioners of Roads and Revenues, Atlanta, Ga., received until noon August 10 for furnishing material and labor required for structural steel work, consisting of columns, girders, beams, bases, etc., for a building covering 130x220 feet, consisting of sub-basement, basement and nine stories, all described in plans and specifications for courthouse, on file and open for inspection at the office of commissioners and of associate architects, A. Ten Eyck Brown and Morgan & Dillon, 607-10 Forsyth Bldg., Atlanta, Ga. (See "Courthouses" under "Buildings Proposed.")

Sugar Machinery.—Pan-American Trading & Supply Co., 10 Cristo St., San Juan, P. R., wants to represent manufacturers of sugar-mill machinery.

Tank.—See "Electric Light Plant."

Turntables.—Pennsylvania Equipment Co., Broad St. and South Penn Sq., Philadelphia, Pa., wants several iron or steel turntables to accommodate locomotives 55 feet long and of 50 tons weight.

Theater Furniture.—See "Furniture, etc."

Veneer Machinery.—See "Woodworking Machinery, etc."

Ventilating Equipment.—See "Heating Plant, etc."

Ventilating Plant.—See "Heating Plant, etc."

Wagons.—Karl Weiss & Co., Leonberg, near Stuttgart, Germany, want to correspond (relative to representing) with manufacturers of traveling wagons for workshops.

Water Mains.—Bids received until noon July 21 for laying 4350 feet of 6 and 12-inch water mains for Columbia, S. C.; plans and specifications can be obtained on request; F. C. Wyse, engineer-superintendent; W. F. Stieglitz, council superintendent.

Waterproofing.—Sealed proposals addressed to Commissioners of Roads and Revenue of Fulton county, Atlanta, Ga., received until noon August 19 for furnishing material and labor required for waterproofing in basement and sub-basement of floors, walls, etc., for building covering 130x230 feet, consisting of sub-basement, basement and nine stories, all as described in plans and specifications for courthouse, on file at the office of commissioners and of associate architects, A. Ten Eyck Brown and Morgan & Dillon, 607-10 Forsyth Bldg., Atlanta. (See "Courthouses" under "Buildings Proposed.")

Water-works.—City of Lubbock, Tex., F. E. Wheeler, Mayor, will open bids August 14 for construction of water-works of 30,000 gallons capacity; large pump, gasoline power; concrete ground reservoir; elevated steel tank and 100-foot steel tower; engineer, L. W. Dalton, Dallas, Tex.

Water-works.—City of Biloxi, Miss., I. Heidenhelm, chairman of finance committee, will want 4, 6 and 8-inch piping, pump for artesian well, gas and electric and steam power, etc., for water-works.

Well Drilling.—Sealed bids received until noon July 27 by town of Friars Point, Miss., for furnishing material and boring of artesian well; specifications may be obtained from J. D. Robinson, City Clerk, or from F. G. Proutt, consulting engineer, 374 Randolph Bldg., Memphis, Tenn.

Weighing Machinery.—etc.—Duyvenne De Wit & Co., Heerengracht 158, Amsterdam,

Holland, want to represent manufacturers of weighing and filling machinery; commission basis.

Wire.—Citizens' Electric Co., Charles Town, W. Va., will need wire for feed and distributing lines.

Wire Rods.—M. Cohan, Galatz, Moldavia, Roumania, wants to represent American manufacturers of wire rods for nails.

Woodworking Machinery.—Southwestern Showcase Manufacturing Co., J. M. Brown, president, 21 N. Orchard St., Oklahoma City, Okla., wants prices on planer, molder, tenoner, mortiser, lathe, band, rip, cut-off and groove saws, jointer and sander.

Woodworking Machinery, etc.—Karl Weiss Co., Leonberg, near Stuttgart, Germany, want to correspond (relative to representing) with manufacturers of tools, apparatus and machinery for glueing and veneering wood; also for making veneer, lining drawers with zinc, etc.

Woodworking Machinery.—See "Handle Machinery."

Woodworking Machinery.—George E. Searing, Shushan, N. Y., wants sticker, dowel machine, surfacer and sand wheels for manufacturing handles, brush backs and brush blocks.

Woodworking Machinery, etc.—Eutler Bros., Grottoes, Va., want prices on 20 or 25-horse-power engine, double surfacer and matcher, self-feed rip saw, jointer, cut-off saw, tenoner, scroll saw, hand-turning lathe, chain mortiser, shafting and pulleys; prefers second-hand guaranteed machinery.

Woodworking Machinery.—See "Sawmill, etc."

Woodworking Machinery.—H. Woodall, Box 130, San Marcos, Tex., wants prices on machinery to manufacture vegetable crates; wants to correspond with manufacturers and patentees of patented crates.

improvements, Asheboro, N. C., \$10,000; water and light extensions, High Point, N. C., \$40,000; water extensions, Macon, Ga., \$15,000. All of these contracts are for immediate construction. The company has been engaged to prepare plans for water-works systems at Maysville, Flowery Branch and Zebulon, Ga.

The Flintkote Manufacturing Co.

In order to centralize the manufacture and sale of the well-known Rex Flintkote roofing and other waterproofing and insulating specialties, the J. A. & W. Bird Company, Boston, has transferred its interests in these products to the Flintkote Manufacturing Co., general offices, 88 Pearl St., Boston, and factory at Rutherford, N. J. The Flintkote company will continue the business on the same general lines as heretofore, but with a further development and extension of the work. The company manufactures Rex Flintkote roofing, Paradox canvas roofing, Tunaloid damp-proofing, Ibeex insulating papers, Rutherford black paper and roof paints. The directors of the Flintkote Manufacturing Co. are Reginald W. Bird, Wm. J. Smith, Frederick C. Overbury, Chas. F. Abbott and Chester E. Rahr. Chas. F. Abbott is general sales manager and Chester E. Rahr assistant sales manager.

Canadian Wagner Electric Co.

The Wagner Electric & Manufacturing Co., Ltd., recently formed under a Dominion of Canada charter, is the exclusive licensee under patents owned and controlled by the Wagner Electric & Manufacturing Co. of St. Louis, Mo. This company, with headquarters in the Bell Telephone Bldg., Montreal, will manufacture and extend the sales of the various Wagner products in Canada, along the same lines as the St. Louis company does in the United States. These will include the alternating-current apparatus and the new unit power factory and adjustable speed motors. Alfred Collyer, who has represented the Wagner company in Canada for many years and is largely responsible for the volume of business done there, has been appointed manager of sales of the new company. The officers of the company besides Mr. Collyer are S. M. Dodd, president; W. A. Layman, vice-president and general manager, and W. S. Thomas, treasurer.

How a Mitchell Auto Works in Virginia.

The record of an automobile recently "discovered" at work in the mountains of Virginia aptly illustrates the automobile as a factor in the industrial world, and especially its utility in rendering quick service and "first aid to the injured" in many fields. This car is a Mitchell four-cylinder car, No. 1609, from which it is evident that it is an old one, as these car numbers now run above the 20,000 mark. It has been used constantly for over five years in rendering "first aid to injured telephones" and as a general utility car for the Warm Sulphur Springs (Va.) Telephone Co. It was reported to the manufacturers, the Mitchell-Lewis Motor Co., Racine, Wis., by a Wisconsin banker who visited that resort recently and who saw the car in service. He stated that "this car has been in use every day, sometimes carrying seven. The driver tells me that he recently pulled a big automobile over the steepest pass in the neighborhood which the other car could not make alone."

Recent Orders for Security Cement.

As showing the wide range of the sales of Security cement, manufactured by the Security Cement & Lime Co., Equitable Bldg., Baltimore, the following sales are noted as among those recently made in addition to the large contracts lately referred to in the Manufacturers Record: The National Building Supply Co., Baltimore, has increased its original contract for cement to be used at the Hospital for the Insane, Catonsville, Md., from 450 barrels to 1450 barrels; contract has been closed with B. F. Sweeten & Son, Baltimore, for 2500 barrels through the National Building Supply Co., to be used on work in Anne Arundel county for the Good Roads Commission; other contracts are H. F. Harper Company, Washington, 1000 barrels; B. F. Sweeten & Son, Baltimore, 2500 barrels for sewerage work in Baltimore; M. J. Beach, through National Building Supply Co., 1000 barrels for Baltimore sewerage work; J. M. Snell & Sons Company, 3000 barrels for general trade requirements; the Virginia Lumber Manufacturing Co., Roanoke, Va., through the Virginia Bridge & Iron Co., Roanoke, 800 barrels; G. G. Long, Culpeper, Va., 1000 barrels; Henry K. Field & Co., Alexandria, Va., 1500 barrels for general trade requirements; George A. Fuller Construction Co., through the National Electric Supply Co., Washington, 2500 barrels

for the building for the Life Insurance Co. of Virginia, Richmond; Henry S. Rippel, for the Painter Memorial, Arlington, Md., through the National Building Supply Co., 700 barrels, to be delivered at Arlington.

TRADE LITERATURE.

A Confederate Memorial

Of interest to a younger generation of Americans is a calendar which is being distributed by Mr. C. C. McDonald, stocks and bonds, Raleigh, N. C. The face of the calendar sheet bears pictures of Confederate leaders and of Confederate currency and postage stamps, and on the back are the words of a number of poems inspired by the war of 50 years ago.

Starrett Mechanical Tools

Two hundred and seventy-five pages of description and illustrations are devoted to the various mechanical tools and instruments of precision as manufactured by the L. S. Starrett Company, Athol, Mass., in catalogue No. 19, issued by the company. Each tool and instrument has its catalogue number, is illustrated and described, dimensions and price given. Electrotypes of any tool shown in the catalogue will be furnished without charge to dealers. The company's New York store is at 132 Liberty St., and the Chicago store 17 N. Jefferson St.

"Burnite" for Roofing and Siding.

The booklet "Burnite Quality Counts," issued by the Birmingham & Seaman Company, 1208-1226 Tribune Bldg., Chicago, describes its product "Burnite" and its manufacture, in which due consideration is given to appearance without sacrificing other essential qualities. Several illustrations in the booklet show the color effects possible in its use as a roofing and siding material. It is stated that "Burnite" can be successfully and economically used on buildings of frame, brick, stone, concrete or other construction. It weighs 90 pounds per square, is put up in rolls, and expert labor is not required to apply it. A folder containing instructions for its application is inserted in the booklet.

"Hercules" Plaster Board.

"Hercules" plaster board is a substitute for wooden and metal lathing and is manufactured by the Plaster Products Co., Hampton, Va. Advantages are claimed for it of combining in one comparatively inexpensive commodity a fire resistant, a sound deadener and a poor conductor of heat and cold. It has gypsum for its base, which, with the other ingredients forming the patented composition, is imbedded under heavy pressure between two sheets of weatherproof fibrous paper. This acts as a blinder for the fireproof mineral base, toughens and strengthens the board, gives a good hold for the nails in applying, and presents a suitable surface for plastering, papering or painting. It is easily secured in place in boards 32x36 inches, adapted to studding 16 or 18 inches between centers. A folder illustrating and describing the various uses and advantages is published for distribution by the company.

Weber Reinforced Concrete Chimneys

It is stated that over 1000 chimneys of the Weber reinforced concrete type have been built in the United States and foreign countries. Illustrations of these chimneys and description of the patented methods of construction are given in the pamphlet just issued by the Weber Chimney Co., 1909 Republic Bldg., Chicago. They are built in two types, the coniform and the cylindrical, and as high as 350 feet and over. A list of over 500 users of Weber chimneys is included in the pamphlet, many of the chimneys being repeat orders. Plans, specifications and proposals will be furnished on request, and copies of this pamphlet may be obtained by addressing the Chicago office of the company. Sales offices are located in all the principal cities. The New York office has recently been removed to 95-97 Liberty St., and is in charge of the Eastern manager, T. C. Maxfield, who has been connected with the company for several years.

Water-Tube Feed-Water Heaters.

The advantages of feed-water heaters in the utilization of exhaust steam are briefly stated in the pamphlet issued by Benj. F. Kelley & Son, 25 Church St., New York, who manufacture the "Standard" water-tube feed-water heater. This company was founded over 30 years ago, and has made a study of the utilization of exhaust steam by applying it to the purpose of heating the feed water. The construction of these feed-water heaters is described, and several line drawings and illustrations of the completed heater are included. The Kelley hot-water service and storage heater and purifier for

INDUSTRIAL NEWS OF INTEREST

Salesman for Cement Wanted.

An experienced salesman in the cement trade who is well acquainted with dealers in the New York and New England territory is wanted by a large cement manufacturing company, as advertised in our Classified Opportunities Department.

A 40,000-Barrel Portland Cement Contract.

Contract has recently been awarded for 40,000 barrels of Old Dominion Portland cement to be used in the U. S. Government construction work at lock and dam No. 14 on the Ohio River at Heidelberg, Ky. This important contract was made with the Wm. G. Hartranft Cement Co., Real Estate Trust Bldg., Philadelphia, selling agents.

To Represent Mechanical Specialties.

A general agency has been established by the Ward-Becke Company, 204 Barrister Bldg., Washington, for mechanical specialties and rubber goods. The company desires to represent manufacturers of railway, mine, mill and factory supplies and mechanical rubber goods of all kinds, and will give prompt attention to inquiries from manufacturers who wish to have their goods handled in Washington.

Columbia Incandescent Lamp Co.

The main sales office of the Columbia Incandescent Lamp Co., which has been located for the past nine years with the works at 2115-2119 Locust St., St. Louis, will be changed about September 1 to the Equitable Bldg., 6th and Locust Sts., St. Louis. This will bring the sales office of the Columbia company nearer the center of business activity of the city, which will be advantageous in many ways.

Godfrey Mosaic Tile Co.'s New Quarters.

In order to meet the demands of increased business, the Godfrey Mosaic Tile Co. of Atlanta has moved its office and warehouse to No. 25 Cone St., in the Walton Bldg. A large stock of materials and samples of mosaic, terrazzo, tile and marble for floors, wainscoting, mantels and other decorations are kept on hand. A specialty is made of artistic tile mantels. Estimates for any work in its line will be submitted on request.

A \$1,000,000 Building Contract.

The building permit for the 18-story Woodmen's structure, for which the contract has been awarded to Selden-Breck Construction Co., St. Louis, was issued to that firm by the Omaha authorities recently. This building will cost \$1,000,000 and will be erected at 14th

and Farnam Sts., Omaha. The Selden-Breck company has awarded the subcontract for excavations to the Partridge-Thompson Company, Omaha in competition with several other bidders. The earth excavation will be utilized for a railway roadbed, and the stone will be broken up for concrete work. The subcontract for 1655 piles for the foundation of the building was awarded to the Bradford-Kennedy Co. of Omaha.

E. C. Sherwood Establishes Sales Office

E. C. Sherwood, formerly New York manager for Hyde Bros. & Co. of Pittsburg, has opened an office in the Hudson Terminal Bldg., 50 Church St., New York. He will handle steel rails, track supplies and a complete line of railway and contractors' equipment. Contractors, logging railway companies and persons interested in buying or disposing of such materials will receive prompt attention when making inquiries regarding steel rails, new or relaying; frogs, switches, spikes, steam shovels, locomotives, locomotive cranes, cars for all purposes, hoisting engines, concrete mixers, derricks, buckets, hoppers, cableways, crushers, pipe, pile drivers, road rollers, timber loaders, grey iron castings, and sand-drying stoves.

General Electric Co. Sales.

An order for 80 two-motor equipments for electric cars has recently been received by the General Electric Co., Schenectady, N. Y., from the Philadelphia Rapid Transit Co. Thirty of these outfits are for use on the elevated division and 50 are for use on the surface division. The equipments for the elevated division consist of two 125-horse-power motors with Sprague-General Electric type M control, and those for the surface division consist of two 60-horse-power 500-volt motors with K-36 control. The International Railway Co. of Buffalo has placed an order with the General Electric Co. for 60 equipments, each consisting of two 60-horse-power 500-volt motors with the K-36 control. They are to be used on a new type of car recently perfected by Thos. E. Mitten, known as the "near side" car.

Activity in Water and Light Plants in South.

Indicative of the activity prevailing in municipal improvements in the South may be noted contracts for various construction work awarded in the last 10 days to the J. B. McCrary Company, consulting and supervising engineers, Atlanta, which include the following: Water and light improvements at Headland, Ala., \$7500; light plant and water improvements, Colquitt, Ga., \$15,000; sewer system and water extensions, Thomasville, N. C., \$30,000; water extensions and light im-

heating water for domestic and manufacturing purposes by using the exhaust steam and the Kelley grease extractor and oil separator manufactured by this firm are also described and illustrated. The pamphlet will be sent on request.

Enameled Brick for Ornamental and Sanitary Construction.

The successful manufacturing of enameled brick has greatly extended the use of brick work not only for artistic effect, but for structural use in giving a pleasing internal and external finish to buildings. Notable developments have been made in the use of enameled brick for sanitary as well as ornamental purposes. The catalogue of the American Enameled Brick & Tile Co., Metropolitan Bldg., New York, illustrates and describes various standard shapes and the uses of the "American" enameled brick, which has been developed by this company until it is now much more economical to use than the imported brick which formerly controlled the market. Instructions for ordering are included in the catalogue. A classified list of buildings furnished with enameled brick by the company, with illustrations of many of them, is also included. The factory is at South River, N. J., and has a total capacity of 6,000,000 brick per annum. Branch offices are located in the principal cities of the United States and Canada.

Lehigh Portland Cement.

In the July bulletin of the Lehigh Portland Cement Co., Allentown, Pa., the importance of co-operation between the dealers in Lehigh Portland cement and the company is explained. The company is extending its publicity work with the view to increasing the sales by dealers, and places at their disposal a number of features to help this work to produce results. Among these features is a large warehouse sign, which will be sent on request for use on Lehigh Portland warehouses; also smaller signs stencilled with the dealer's name. The company also sends a copy of "The Modern Farmer," a booklet on cement uses for the farm, to every address in his vicinity furnished by the dealer, with his name printed in a conspicuous place on it. This issue of the monthly bulletin contains items of interest on cement and concrete, several illustrations of buildings, ornamental fences, porches, etc., in which this cement was used. The annual capacity of its various plants amounts to 11,000,000 barrels. Communications regarding this bulletin should be addressed to the Chicago office, People's Gas Bldg.

American Vanadium Facts

The June issue of "American Vanadium Facts" was styled the convention issue for the attention devoted to the annual convention of the Railway Master Mechanics and Master Carbuilders held at Atlantic City. Descriptions of many of the exhibits in which vanadium steel occupied an important part are given, and illustrations are included showing parts of exhibits made by the Bethlehem Steel Co. of Bethlehem, Pa.; the Carnegie Steel Co. of Pittsburgh; the Cleveland-Canton Spring Co. of Canton, O., and of the United States Steel Co. of Canton, O. The illustrations include test pieces of various forms which had undergone the severest tests, showing the high qualities of vanadium steel and chrome-vanadium steel. This issue also contains photographs of case-hardened type "A" chrome-vanadium forgings showing results now being obtained by its use for general and special service in locomotive construction by the American Locomotive Co., 30 Church St., New York. "American Vanadium Facts" is published monthly by the American Vanadium Co., 308 Frick Bldg., Pittsburgh, and will be sent free, together with the booklet containing detailed information on the manufacture, uses and heat treatment of vanadium steel, to persons interested in the improvement of steel and other metals.

WILL EXTEND WEST.

Valdosta, Moultrie & Western Also to Build Extensive Terminals and Shops.

President Frank Roberts, referring to the report that the Valdosta, Moultrie & Western Railroad Co., Valdosta, Ga., would extend west from Moultrie, Ga., to Montgomery, Ala., says that it has been authorized by the Georgia Railroad Commission to issue \$630,000 of 5 per cent. 40-year bonds to take up outstanding obligations, build extensive terminals at Valdosta and Moultrie; also shops, and pur-

chase equipment. The Moultrie, Fort Gaines & Western Railway (an extension of the former) has located its line, secured right of way and terminal property from Moultrie to Newton, Ga., 40 miles, via Sales City and Camilla. Construction is to begin soon.

IN VIRGINIA'S APPLE BELT.

Activities Centering About Staunton in the Valley.

[Special Cor. Manufacturers Record.]

Staunton, Va., July 5.

Staunton is a center of the great fruit belt of Virginia. Much farther south the climate is too warm for best success with winter varieties of apples that grow to the greatest perfection here. We are not limited to apples, however, for peaches, as well as the small fruits, grow in abundance and to great perfection in the valley. These fruits come quickly into bearing, and can be made to yield a profit as well as to take care of the apple orchard while it is growing to maturity. The orchards are almost within the city limits, and the excellent roads bring the entire county of Augusta, containing a large area of excellent orchard lands, to the very doors of the city.

Staunton and shipping points immediately adjacent thereto shipped in 1910, according to report of the Virginia State Horticultural Society, upwards of 170,000 barrels of apples. The large number of trees just coming into bearing and now being planted will greatly augment these figures in the near future.

This section is within a few hours' travel of the great Eastern markets and export facilities, hence has a great advantage in cheap freight rates. It is also in an old settled country where labor is reasonably plentiful—a very important item.

Because of its central location and railroad facilities, Staunton is the natural home of the growers' co-operative exchange, factories for working up by-products of fruits, barrel factories, etc. It has already attracted a scientifically trained and experienced orchard expert, who can be consulted on all important work or engaged to direct orchard work, etc. The growers are not slow to avail themselves of this service, and a great field is opening up for expert work along this line. Many young men could find employment in this field as lucrative as in almost any other line, if properly trained and sufficiently experienced. Work for the States or for the National Government that offers an opportunity for travel and observation, when coupled with successful experience, is the very best training for the profession of orchard expert. The writer realized this fully, and during the 10 years he was connected with the Virginia Polytechnic Institute at Blacksburg and as State Entomologist of Virginia gathered much valuable information covering the whole field. He is one of the charter members, and at present secretary-treasurer of the Shenandoah Valley Fruit Growers' Association, which had such signal success in handling the apple crop of this section last season. This organization started out with less than \$300 in the treasury on July 1, 1910, and did a business of \$170,000, obtaining some of the very best prices for the fruit of its members of any organization in the country. Some of its boxed apples sold as high as \$3.50 per box. It has now extended its scope, changed its name to the Virginia Fruit Growers, Inc., and increased its capital stock to \$50,000, and bids fair to become the great factor in the development of the fruit industry in this State.

The fruit industry, like others, is destined to be developed by larger aggrega-

tions of capital than in the past. Under these conditions expert knowledge can be brought into the direction of its affairs and great economies practiced in many ways, thus reducing the cost of growing and maintaining the orchards.

With these unique advantages it is but natural that not only home capital, but outside capital as well, should be attracted to the orchard industry. This development will, if properly directed, bring wealth not only to the investors, but also untold advantages to this section in the general improvement of business conditions. The local people realize so well the advantages offered by this section that they are investing thousands of dollars in the fruit industry. Lands that changed hands a few years ago at \$50 to \$75 per acre are now selling at \$125 to \$150, and values are continuing to advance. A few of the companies organized recently are enumerated below:

Fruitland Orchards, Staunton; J. Yest, secretary-treasurer; maximum capital stock \$10,000; object, the development of 150 acres of orchard, including apples and peaches and small fruits.

Mt. Clifton Orchards, Inc., Mt. Jackson; John L. Wissler, president, Mt. Jackson; Judge E. D. Newman, treasurer, Woodstock; John Lloyd Phillips, Staunton, secretary; capital stock \$50,000. This company has purchased a tract of 350 acres of the best orchard land in Shenandoah county near Mt. Jackson, on which are 9000 bearing peach trees and about 14,000 apple trees, most of which are in their fifth year.

Belle-Vue Orchard Co., Inc., Staunton; John S. Pancake, president; Wm. H. Pratt, secretary-treasurer; capital stock \$25,000. This company has purchased a fine bearing orchard and is planting other lands at Fishersville.

Old Dominion Orchards, Inc., Staunton; W. J. Phillips, Jr., Bureau of Entomology, Washington, D. C., president; J. P. Neff, Staunton, secretary-treasurer; John Lloyd Phillips, Staunton, general manager; capital stock \$100,000. This company has purchased a tract of 380 acres in the best orchard section near Greenwood, Albemarle county, and 125 acres at Fishersville, and planted out the past spring 13,000 trees of apple and peach. It contemplates greatly extending its work. This company now has in view the purchase of some valuable bearing orchards that will greatly add to the value of its property.

Turkey Knob Orchards at Mt. Jackson. This company has purchased nearly 500 acres of bearing apple trees near Mt. Jackson at a cost of almost a quarter of a million dollars.

Staunton Cooperage Co., Inc., Staunton; McChesney Goodall, Staunton, president; capital stock \$25,000; object, to operate a barrel factory for the manufacture of apple barrels and boxes, flour barrels, etc.

Virginia Wholesale Nurseries, Inc., Blacksburg; branch office, Staunton; John Lloyd Phillips, Staunton, president; M. F. Slusser, Blacksburg, secretary-treasurer. This nursery is making a specialty of furnishing nursery trees to the commercial orchardist.

Staunton, a flourishing city of 10,604 population, an increase of 45½ per cent. in 10 years, is in the beautiful Valley of Virginia at an elevation of 1500 feet above sea level, with the Blue Ridge Mountains on the east and the Alleghenies on the west rising to an elevation upward of 3500 and 4500 feet, respectively. These features combine to give this section a delightful climate, neither too warm in summer nor too cold in winter. The assessed value of property in Staunton is \$6,518,717, an

increase of 93 per cent. in 10 years. The city has bank resources of \$3,500,000. The tax rate is not high. Staunton has a live Chamber of Commerce and numerous manufacturing plants. Putnam's organ factory, which 15 years ago employed one man and a boy, now employs 125 men. Every day the White Star mills send out 500 barrels of fine Virginia flour, and workmen in Pittsburgh wear Staunton overalls. The Beverley Manufacturing Co. from a very modest beginning has come to employ 75 hands, and its flags and pennants go to all points of the compass. Prosperous plow works are not only supplying the Southern trade, but are shipping plows to Canada; Bodley's wagon works send wagons to South America, and the Virginia Metal Roofing Co. is doing a flourishing business.

The city owns a magnificent water supply in the Blue Ridge Mountains, and has many advantages that make it an ideal residence city. The majestic hills in this vicinity, covered with beautiful groves and natural bluegrass, excellent roads, etc., are now more than ever attracting settlers from less favored sections.

Staunton's educational facilities include Mary Baldwin Seminary for Young Women; Stuart Hall, formerly Virginia Female Institute; Staunton Military Academy; Virginia State Institution for the Deaf and Blind; two excellent high schools and schools of the primary grades, all under exceptionally efficient management.

JOHN LLOYD PHILLIPS.

The latest report of the West Virginia State Board of Agriculture deals with the annual meeting of the West Virginia Dairy Association and the Live-Stock Association.

Mr. H. V. D. King, recently connected with the industrial department of the Southern Railway Co., has been elected secretary of the Board of Trade of Clarksburg, W. Va.

FINANCIAL NEWS

The MANUFACTURERS RECORD invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

Review of the Baltimore Market.

Office MANUFACTURERS RECORD.

Baltimore, Md., July 19.

There was a fair amount of business in the Baltimore stock market during the past week, but the only feature was a rise in Houston Oil, which gained several points for the preferred.

In the trading United Railways common sold from 19¼ to 19½; do. income bonds from 65 to 64½; do. funding 5s, 88½ to 89; do. do. scrip, 88 to 90; United 4s, 87 to 86½; do. notes, 99¼ to 99½; Consolidated Gas, Electric Light & Power common, 92¼ to 93; do. preferred, 99½ to 99¼; do. 4½s, 87; do. notes, 100¼ to 100; Consolidated Gas 5s, 100; do. 4½s, 98 to 98½; Seaboard Air Line preferred, 46 to 46¼; Seaboard Company common, 27¼; do. first preferred, 87 to 87¼; do. second preferred, 59¼ to 60; Seaboard 4s, stamped, 87½; do. adjustment 5s, 80 to 80½; Mt. Vernon-Woodberry Cotton Duck 5s, 76 to 76½; G. B. S. Brewing common, voting trust, 1½; do. 4s, 44½.

Bank stock sold as follows: Marine, 43½; Bank of Baltimore, 170; Mechanics', 28½; Merchants', 186½ to 184; Western, 40½; National City, 100 to 111½; Citizens', 41; First National, 148. Fidelity & Deposit sold at 151; Colonial Trust, 29 to 28; Maryland Casualty, 90; Maryland Trust common, 88 to 91; Mercantile Trust, 146½.

Other securities were traded in thus: Atlantic Coast Line of Connecticut, 249 to

250; City & Suburban (Baltimore) 5s, 105%; Consolidation Coal, 103%; Baltimore, Sparrows Point & Chesapeake 4 1/2%, 97 1/2% to 97 1/2%; Wilmington & Weldon 5s, 110; Atlantic Coast Line Convertible debenture 4s, 100 to 100%; Consolidation Coal refunding 5s, 95 1/2%; Houston Oil common, 7 1/2% to 9; do. preferred, 5 1/2% to 6 1/2%, reacting to 6 1/2%; Baltimore City 3 1/2%, 1980, 89; do. 5s, 1916, 104; do. 4s, 1954, 101 1/4; do. do. 1958, 101 1/4; Fairmont & Clarksburg Traction 5s, 101 to 100%; do. preferred, 85 1/2%; Anacostia & Potomac 5s, 101 1/4; Norfolk Railway & Light 5s, 101 1/4; Columbia & Greenville 1st 4s, 100%; Georgia, Carolina & Northern 5s, 100%; Detroit United 4 1/2s, 82; Atlanta 100%; to 100; Columbia & Greenville 1st 4s, 106 1/4; Georgia, Carolina & Northern 5s, 105 1/4; Baltimore City Passenger 4 1/2s, 100 1/4; do. 5s, Consolidated Street Railway 5s, 105; Baltimore Electric 5s, stamped, 96 to 95 1/2; Georgia & Alabama Consolidated 5s, 105 1/4; Maryland Electric 5s, 98 1/2; Wilmington & Weldon 4s, 96 1/2; Citizens' Railway, Light & Power of Newport News 5s, 81 1/2; Maryland & Pennsylvania 4s, 87 1/2; Virginia Railway & Power common, 36; Virginia Midland 3d, 106; do. 4th, 104; Augusta & Aiken preferred, 74; Western Maryland common, 65; Central Railway 1st 5s, 107 1/4; Coal & Iron Railway 5s, 102; Lexington Railway 5s, 95 1/4 to 95 1/2; Atlantic Coast Line Consolidated 4s, 94 1/2; Baltimore Traction (North Baltimore Division) 5s, 110; Atlantic Coast Line of South Carolina 4s, 96 1/4; Merchants & Miners' Transportation Co., voting trust, 71; Norfolk & Portsmouth Traction 5s, 88 1/2.

SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended July 19, 1911.

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast of Conn.	100	25 1/2	25 3/4
Fairmont & Clarksburg Trac. Pfd.	100	80	80
Georgia Sou. & Fla. 1st Pfd.	100	81 1/4	81 1/2
Georgia Sou. & Fla. 2d Pfd.	100	75	75
Norfolk & Ports. Trac. new.	100	75	75
Norfolk & Ports. Trac. Pfd.	100	77 1/2	80 1/4
Seaboard Co. Common.	100	27 1/2	27 3/4
Seaboard Co. 1st Pfd.	100	87 1/2	87 3/4
Seaboard Co. 2d Pfd.	100	60	60 1/2
United Rys. & Elec. Co.	50	19 1/4	19 1/2
Virginia Ry. & Power.	100	36	36
Virginia Ry. & Power Pfd.	100	77	77

Bank Stocks.	Par.	Bid.	Asked.
Bank of Baltimore.	100	168	171
Bank of Commerce.	100	31 1/4	32 1/2
Citizens'.	100	40 1/2	42
Farmers & Merchants.	40	52 1/2	53 1/2
First National.	100	148	150
Howard.	100	13 1/2	14
Marine.	100	30	32 1/2
Mechanics.	100	28 1/2	29
Merchants'.	100	186	186 1/2
National City.	100	110	116
Union.	100	143	143
Western.	20	40 1/2	40 1/2

Trust, Fidelity and Casualty Stocks.	Par.	Bid.	Asked.
Baltimore Trust.	100	168	169 1/2
Continental Trust.	100	215	225
Fidelity & Deposit.	50	152	152
Maryland Trust.	100	90 1/2	92
Maryland Casualty.	25	90	90
Mercantile Trust & Deposit.	50	146	146
Union Trust.	50	70	70

Miscellaneous Stocks.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron Pfd.	100	76	76
Con. Gas, Elec. Lt. & P. Com.	100	92 1/2	93 1/2
Con. Gas, Elec. Lt. & P. Pfd.	100	90 1/4	90 1/2
Consolidation Coal.	100	103	104
G. B. S. Brewing Co.	100	1 1/2	2 1/2
Georges Creek Coal.	100	74	74
Mer. & Miners' Trans. Co.	100	70	72 1/2
Baltimore Brick.	100	25	25

Railroad Bonds.	Par.	Bid.	Asked.
Atlantic Coast 1st 4s.	100	95 1/2	95 1/2
Atlantic Coast Conv. Deben. 4s.	100 1/2	100 1/2	100 1/2
At. Coast (Conn.) 4s, Cts. 5-20s.	100	92 1/2	92 1/2
Atlantic Coast (Conn.) 5s, Cts.	100	104	104
Balto. & Harpersburg 5s.	100	105 1/2	106 1/2
Charleston & West. Car. 5s.	100	94	94
Coal & Coke Railway 5s.	100	102	103
Coal & Iron Railway 5s.	100	102	103
Col. & Green. 1st 6s.	100	105 1/2	106 1/2
East Tenn. Va. & Ga. 5s.	100	111 1/2	111 1/2
Georgia & Alabama 5s.	100	105 1/2	105 1/2
Georgia & Florida 5s.	100	77	77
Georgia, Car. & North. 1st 5s.	100	105 1/2	105 1/2
Georgia Pacific 1st 5s.	100	114 1/2	114 1/2
Y. & R. Southern & Fla. 1st 5s.	100	97 1/2	98 1/4
Jaccon, Duluth & Savannah 5s.	100	87 1/2	87 1/2
Maryland & Pennsylvania 4s.	100	87 1/2	87 1/2
Potomac Valley 1st 5s.	100	108	108
Raleigh & Augusta 1st 6s.	100	117 1/2	117 1/2
Savannah, Fla. & West. 5s.	100 1/2	109 1/2	111
Seaboard 4s, stamped.	100	87	87 1/2
Seaboard Adjustment 5s.	100	81 1/2	82
Seaboard & Roanoke 6s.	100	100	100
Virginia Midland 3d 6s.	100	106 1/2	106 1/2
Virginia Midland 4th 5s.	100	103	103
Virginia Midland 5th 5s.	100	104 1/2	104 1/2
Western Maryland 4s.	100	107 1/2	107 1/2
Western N. C. Con. 6s.	100	105 1/4	105 1/4
West Va. Con. 1st 6s.	100	105 1/2	105 1/2
Wilmington & Newbern 4s.	100	97 1/2	99
Wilmington & Weldon 4s.	100	96	98
Wilmington & Weldon 5s.	100	110	110 1/4

Street Railway Bonds.	Par.	Bid.	Asked.
Anacostia & Potomac 5s.	100 1/4	101 1/4	101 1/4
Atlanta Con. Street Railway 5s.	100	105	105
Augusta Railway & Electric 5s.	100	103	103
Baltimore City Passenger 5s.	100 1/4	106 1/4	106 1/4
Baltimore City Passenger 4 1/2s.	100 1/4	104 1/4	104 1/4
Balto. Sp. Pt. & C. 4 1/2s.	100 1/4	97 1/4	97 1/4
Baltimore Traction (N. B.) 5s.	100 1/4	110 1/4	110 1/4
Central Railway (Balto.) Con. 5s.	107 1/2	108 1/2	108 1/2
Charleston Con. Elec. 5s.	100	98 1/2	98 1/2
Citizens' Ry. & P. of N. C. 5s.	80	80	80
City & Suburban 5s (Balto.)	105 1/4	105 1/4	105 1/4
City & Suburban 5s (Wash.)	102 1/4	102 1/4	102 1/4

Fairmont & Clarksburg Trac. 5s.	100 1/4	100 1/4
Lake Roland Elevated 5s.	100 1/4	100 1/4
Lexington Railway 1st 5s.	94 1/2	95
Maryland Electric Railway 5s.	98	98 1/2
Memphis Street Railway 5s.	98 1/4	99
Newport News & Old Point 5s.	86 1/2	85
Norfolk & Portsmouth Trac. 5s.	86 1/2	86 1/2
Norfolk Railway & Light 5s.	100	100 1/4
Norfolk & Weldon 1st 4s.	86 1/2	86 1/2
United Railways Income 4s.	86 1/2	86 1/2
United Railways Funding 5s.	86 1/2	86 1/2

Miscellaneous Bonds.	Par.	Bid.	Asked.
Ala. Con. Coal & Iron 5s.	85	86 1/2	86 1/2
Baltimore Brick 5s.	82	84	84
Baltimore Electric 5s, Stp.	95 1/4	95 1/4	95 1/4
Consolidated Gas 4 1/2s.	90	109 1/4	109 1/4
Consolidated Gas 4 1/2s.	97 1/2	98 1/2	98 1/2
Con. Gas, Elec. Lt. & P. 4 1/2s.	97 1/2	97 1/2	97 1/2
Fairmont Coal 1st 5s.	96 1/2	97 1/2	97 1/2
G. B. S. Brewing 1st 4s.	44	44 1/2	44 1/2
Merchants & Miners Extn. 4s.	97 1/2	97 1/2	97 1/2
Mt. Vernon-Woodby Cot. Duck 5s.	76 1/2	76 1/2	76 1/2
United Elec. Lt. & P. 4 1/2s.	80 1/4	80 1/4	80 1/4

SOUTHERN COTTON-MILL STOCKS.

Quotations furnished by William S. Glenn, Broker, Spartanburg, S. C., for Week Ending July 17.

Albaville Cotton Mills (S. C.)	Bid.	Asked.
Albaville Mfg. Co. (S. C.)	90	90
American Spinning Co. (S. C.)	100	100
Anderson Cotton Mill (S. C.)	98	98
Anderson Cot. Mills (S. C.) Pfd.	100	100
Arcadia Mills (S. C.)	98	98
Arkwright Cotton Mills (S. C.)	99	100
Augusta Factory (Ga.)	40	40
Avondale Mills (Ala.)	116	116
Belton Mills (S. C.)	130	138
Brandon Mills (S. C.)	98	103
Brogan Mills (S. C.)	98	90
Cannon Mfg. Co. (N. C.)	125	125
Cabarrus Cotton Mills (N. C.)	130	135
Chadwick Mfg. Co. (N. C.) Pfd.	100	100
Chiquola Mfg. Co. (S. C.)	170	170
Clifton Mfg. Co. (S. C.) Pfd.	97	97
Clinton Cotton Mills (S. C.)	120	120
Columbia Mfg. Co. (Ga.)	98	98
Courtyard Mfg. Co. (S. C.)	100	100
Dallas Mfg. Co. (Ala.)	90	90
Darlington Mfg. Co. (S. C.)	90	90
D. E. Converse Co. (S. C.)	90	90
Drayton Mills (S. C.)	95	100
Eagle & Phenix Mills (Ga.)	117	117
Easley Cotton Mills (S. C.)	162	175
Enoree Mfg. Co. (S. C.)	50	65
Enoree Mfg. Co. (S. C.) Pfd.	96	100
Enterprise Mfg. Co. (Ga.)	65	75
Enterprise Cotton Mills (Ga.)	290	290
Gaffney Mfg. Co. (S. C.)	65	65
Gainesville Cotton Mills (Ga.)	72	80
Glenwood Cotton Mills (S. C.)	130	150
Gluck Mills (S. C.)	99	99
Granby Cot. Mills (S. C.) 1st Pfd.	35	45
Graniteville Mfg. Co. (S. C.)	140	145
Greenwood Cotton Mills (S. C.)	57	60
Grendel Mills (S. C.)	90	100
Hartsville Cotton Mill (S. C.)	160	175
Hamlet Mills (N. C.)	160	175
Inman Mills (S. C.)	100	105
King Mfg. Co. J. P. (Ga.)	80	85
Lancaster Cotton Mills (S. C.)	130	130
Lancaster Cot. Mills (S. C.) Pfd.	97	100
Langley Mfg. Co. (S. C.)	104	112
Laurens Mills (S. C.)	127	135
Limestone Mills (S. C.)	155	160
Lockhart Mills (S. C.)	90	90
Lockhart Mills (S. C.) Pfd.	90	90
Loray Cotton Mills (N. C.) Pfd.	95	95
Marble Cotton Mills (S. C.)	95	95
Mills Mfg. Co. (S. C.)	102	102
Molokan Mfg. Co. (S. C.)	105	105
Monaghan Mills (S. C.)	100	100
Monarch Cotton Mills (S. C.)	105	105
Newberry Cotton Mills (S. C.)	125	130
Ninety-Six Cotton Mills (S. C.)	130	150
Norris Cotton Mills (S. C.)	121	130
Olympia Cotton Mills (S. C.)	90	90
Ort Cotton Mills (S. C.)	92	98
Paclet Mfg. Co. (S. C.)	90	90
Paclet Mfg. Co. (S. C.) Pfd.	95	100
Parker Common.	80	80
Parker Pfd.	85	85
Peizer Mfg. Co. (S. C.)	163	163
Piedmont Mfg. Co. (S. C.)	175	177
P. Mfg. Co. F. W. (S. C.)	110	125
Saxon Mills (S. C.)	120	130
Sibley Mfg. Co. (Ga.)	65	68
Spartan Mills (S. C.)	120	130
Trion Mfg. Co. (Ga.)	120	130
Tucon Mills (S. C.)	310	350
Union-Buffalo (S. C.) 1st Pfd.	75	75
Union-Buffalo (S. C.) 2d Pfd.	16	16
Victor Mfg. Co. (S. C.)	110	115
Warren Mfg. Co. (S. C.)	90	95
Warren Mfg. Co. (S. C.) Pfd.	100	105
Washington Mills (Va.)	28	28
Washington Mills (Va.) Pfd.	106	110
Whitney Mfg. Co. (S. C.)	110	110
Wiscasset Mills (N. C.)	135	135
Woodcroft Cotton Mills (S. C.)	110	115
Woodside Cotton Mills (S. C.)	100	100
Watts Mills (S. C.)	80	80
Williamston Mills (S. C.)	120	125

Albaville Cotton Mills (S. C.)... Bid. 90, Asked. 90
Albaville Mfg. Co. (S. C.)... Bid. 90, Asked. 90
American Spinning Co. (S. C.)... Bid. 100, Asked. 100
Anderson Cotton Mill (S. C.)... Bid. 98, Asked. 98
Anderson Cot. Mills (S. C.) Pfd... Bid. 100, Asked. 100
Arcadia Mills (S. C.)... Bid. 98, Asked. 98
Arkwright Cotton Mills (S. C.)... Bid. 99, Asked. 100
Augusta Factory (Ga.)... Bid. 40, Asked. 40
Avondale Mills (Ala.)... Bid. 116, Asked. 116
Belton Mills (S. C.)... Bid. 130, Asked. 138
Brandon Mills (S. C.)... Bid. 98, Asked. 103
Brogan Mills (S. C.)... Bid. 98, Asked. 90
Cannon Mfg. Co. (N. C.)... Bid. 125, Asked. 125
Cabarrus Cotton Mills (N. C.)... Bid. 130, Asked. 135
Chadwick Mfg. Co. (N. C.) Pfd... Bid. 100, Asked. 100
Chiquola Mfg. Co. (S. C.)... Bid. 170, Asked. 170
Clifton Mfg. Co. (S. C.) Pfd... Bid. 97, Asked. 97
Clinton Cotton Mills (S. C.)... Bid. 120, Asked. 120
Columbia Mfg. Co. (Ga.)... Bid. 98, Asked. 98
Courtyard Mfg. Co. (S. C.)... Bid. 100, Asked. 100
Dallas Mfg. Co. (Ala.)... Bid. 90, Asked. 90
Darlington Mfg. Co. (S. C.)... Bid. 90, Asked. 90
D. E. Converse Co. (S. C.)... Bid. 90, Asked. 90
Drayton Mills (S. C.)... Bid. 95, Asked. 100
Eagle & Phenix Mills (Ga.)... Bid. 117, Asked. 117
Easley Cotton Mills (S. C.)... Bid. 162, Asked. 175
Enoree Mfg. Co. (S. C.)... Bid. 50, Asked. 65
Enoree Mfg. Co. (S. C.) Pfd... Bid. 96, Asked. 100
Enterprise Mfg. Co. (Ga.)... Bid. 65, Asked. 75
Enterprise Cotton Mills (Ga.)... Bid. 290, Asked. 290
Gaffney Mfg. Co. (S. C.)... Bid. 65, Asked. 65
Gainesville Cotton Mills (Ga.)... Bid. 72, Asked. 80
Glenwood Cotton Mills (S. C.)... Bid. 130, Asked. 150
Gluck Mills (S. C.)... Bid. 99, Asked. 99
Granby Cot. Mills (S. C.) 1st Pfd... Bid. 35, Asked. 45
Graniteville Mfg. Co. (S. C.)... Bid. 140, Asked. 145
Greenwood Cotton Mills (S. C.)... Bid. 57, Asked. 60
Grendel Mills (S. C.)... Bid. 90, Asked. 100
Hartsville Cotton Mill (S. C.)... Bid. 160, Asked. 175
Hamlet Mills (N. C.)... Bid. 160, Asked. 175
Inman Mills (S. C.)... Bid. 100, Asked. 105
King Mfg. Co. J. P. (Ga.)... Bid. 80, Asked. 85
Lancaster Cotton Mills (S. C.)... Bid. 130, Asked. 130
Lancaster Cot. Mills (S. C.) Pfd... Bid. 97, Asked. 100
Langley Mfg. Co. (S. C.)... Bid. 104, Asked. 112
Laurens Mills (S. C.)... Bid. 127, Asked. 135
Limestone Mills (S. C.)... Bid. 155, Asked. 160
Lockhart Mills (S. C.)... Bid. 90, Asked. 90
Lockhart Mills (S. C.) Pfd... Bid. 90, Asked. 90
Loray Cotton Mills (N. C.) Pfd... Bid. 95, Asked. 95
Marble Cotton Mills (S. C.)... Bid. 95, Asked. 95
Mills Mfg. Co. (S. C.)... Bid. 102, Asked. 102
Molokan Mfg. Co. (S. C.)... Bid. 105, Asked. 105
Monaghan Mills (S. C.)... Bid. 100, Asked. 100
Monarch Cotton Mills (S. C.)... Bid. 105, Asked. 105
Newberry Cotton Mills (S. C.)... Bid. 125, Asked. 130
Ninety-Six Cotton Mills (S. C.)... Bid. 130, Asked. 150
Norris Cotton Mills (S. C.)... Bid. 121, Asked. 130
Olympia Cotton Mills (S. C.)... Bid. 90, Asked. 90
Ort Cotton Mills (S. C.)... Bid. 92, Asked. 98
Paclet Mfg. Co. (S. C.)... Bid. 90, Asked. 90
Paclet Mfg. Co. (S. C.) Pfd... Bid. 95, Asked. 100
Parker Common... Bid. 80, Asked. 80
Parker Pfd... Bid. 85, Asked. 85
Peizer Mfg. Co. (S. C.)... Bid. 163, Asked. 163
Piedmont Mfg. Co. (S. C.)... Bid. 175, Asked. 177
P. Mfg. Co. F. W. (S. C.)... Bid. 110, Asked. 125
Saxon Mills (S. C.)... Bid. 120, Asked. 130
Sibley Mfg. Co. (Ga.)... Bid. 65, Asked. 68
Spartan Mills (S. C.)... Bid. 120, Asked. 130
Trion Mfg. Co. (Ga.)... Bid. 120, Asked. 130
Tucon Mills (S. C.)... Bid. 310, Asked. 350
Union-Buffalo (S. C.) 1st Pfd... Bid. 75, Asked. 75
Union-Buffalo (S. C.) 2d Pfd... Bid. 16, Asked. 16
Victor Mfg. Co. (S. C.)... Bid. 110, Asked. 115
Warren Mfg. Co. (S. C.)... Bid. 90, Asked. 95
Warren Mfg. Co. (S. C.) Pfd... Bid. 100, Asked. 105
Washington Mills (Va.)... Bid. 28, Asked. 28
Washington Mills (Va.) Pfd... Bid. 106, Asked. 110
Whitney Mfg. Co. (S. C.)... Bid. 110, Asked. 110
Wiscasset Mills (N. C.)... Bid. 135, Asked. 135
Woodcroft Cotton Mills (S. C.)... Bid. 110, Asked. 115
Woodside Cotton Mills (S. C.)... Bid. 100, Asked. 100
Watts Mills (S. C.)... Bid. 80, Asked. 80
Williamston Mills (S. C.)... Bid. 120, Asked. 125

Albaville Cotton Mills (S. C.)... Bid. 90, Asked. 90
Albaville Mfg. Co. (S. C.)... Bid. 90, Asked. 90
American Spinning Co. (S. C.)... Bid. 100, Asked. 100
Anderson Cotton Mill (S. C.)... Bid. 98, Asked. 98
Anderson Cot. Mills (S. C.) Pfd... Bid. 100, Asked. 100
Arcadia Mills (S. C.)... Bid. 98, Asked. 98
Arkwright Cotton Mills (S. C.)... Bid. 99, Asked. 100
Augusta Factory (Ga.)... Bid. 40, Asked. 40
Avondale Mills (Ala.)... Bid. 116, Asked. 116
Belton Mills (S. C.)... Bid. 130, Asked. 138
Brandon Mills (S. C.)... Bid. 98, Asked. 103
Brogan Mills (S. C.)... Bid. 98, Asked. 90
Cannon Mfg. Co. (N. C.)... Bid. 125, Asked. 125
Cabarrus Cotton Mills (N. C.)... Bid. 130, Asked. 135
Chadwick Mfg. Co. (N. C.) Pfd... Bid. 100, Asked. 100
Chiquola Mfg. Co. (S. C.)... Bid. 170, Asked. 170
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Ala., Huntsville.—Reported that all bids received July 10 for the \$50,000 of 4½ per cent. Madison county road bonds were rejected.

Ala., Montgomery.—Reported that an election is to be held, probably August 5, to vote on either \$250,000 or \$275,000 of 5 per cent. 30-year bonds.

Ala., Montevallo.—Reported voted: \$5000 of school bonds.

Ark., Augusta.—Wm. R. Compton & Co., St. Louis, are reported to have purchased \$40,000 of 5½ per cent. 1-20-year school district building bonds.

Fla., Daytona Beach.—Reported defeated: Bonds for municipal water-works.

Fla., Gainesville.—Of the \$75,000 of bonds to be voted on September 5, \$45,000 are to be used for enlarging water plant and \$35,000 for vitrified-brick pavements.

Fla., Palatka.—Reported voted: \$15,000 of 5 per cent. paving bonds.

Fla., Pensacola.—Official: Bids will be received until 10 A. M. August 15 by the Commissioners of Escambia county for \$180,000 of 4½ per cent. bonds; denomination \$500. James Macgibbon is clerk Board of Commissioners.

Fla., Pensacola.—Press dispatches state that bids for the \$180,000 of 4½ per cent. 30-year Escambia county jail and courthouse bonds will be opened at 10 o'clock August 15. Jox. I. Johnson is chairman County Commissioners.

Ga., Ashburn.—Official: Voted June 15: \$20,000 of 5 per cent. sewer and water bonds; denomination \$1000; dated January 1, 1912; maturity 1923 to 1942; date of opening bids not yet determined.

Ga., Darien.—An election is to be held in McIntosh county. It is reported, to vote on \$20,000 of road bonds.

Ga., Dublin.—Official: August 30 an election is to be held to vote on \$300,000 of 5 per cent. Laurens county road and bridge bonds. Address T. J. Blackshear, Secretary.

Ga., Macon.—Official: Bids will be received until noon September 4 by A. R. Tinsley, treasurer, for \$700,000 of 4½ per cent. water-works bonds, same being part of issue of \$900,000 voted March 18; denomination \$1000; dated July 1, 1911.

Ga., Macon.—An election is to be held in Bibb county. It is reported, to vote on \$525,000 of bonds as follows: Bridges, \$300,000; courthouse, \$100,000; high school, \$100,000; jail, \$25,000.

Ga., Moultrie.—The question of issuing \$300,000 of Colquitt bridge, jail and road bonds is being agitated by Colquitt county. J. W. Cole is chairman Commissioners of Roads and Revenues.

Ga., Statesboro.—Dispatches state that it is probable an election will be held in September to vote on \$45,000 of sewerage bonds.

Ga., Washington.—Reported voted: \$30,000 of electric-light plant bonds. E. A. Barnett is Mayor.

Ky., Louisville.—The National Bank of Kentucky, Louisville, according to press dispatches, has been awarded \$289,000 of 4½ per cent. 10-year refunding bonds at \$11,000 premium.

Ky., Murray.—Reported that an election is to be held in Calloway county in November to vote on \$40,000 of courthouse bonds.

Ky., Newport.—Reported that an ordinance has been passed providing for \$100,000 of three-year improvement bonds.

La., Donaldsonville.—Official: August 1 an election is to be held to vote on bonds of New River Drainage District. Leon Picard is president Board of Commissioners.

La., Jeanerette.—Reported voted: \$90,000 of street-improvement bonds.

La., Opelousas.—Reported that on August 24 an election is to be held to vote on \$40,000 of 5 per cent. 40-year sewer bonds.

La., Angie.—The Washington Parish School Board is reported to have been authorized to issue \$3000 of bonds.

Miss., Biloxi.—Official: City is offering \$70,000 of water-works bonds. Address I. Heidenheim, chairman finance committee.

Miss., Booneville.—Bids will be received until noon August 1 by W. L. Newhouse, secretary of the Board of Mayor and Aldermen, for \$15,000 of 5 per cent. 20-year paving and improvement bonds.

Miss., Clarksdale.—Official: Bids will be opened July 25 by M. W. Purnell, City Clerk, for \$60,000 of 5 per cent. light, water and sewer bonds; denomination \$500; dated September 1, 1911.

Miss., Clarksdale.—Official: Bids will be opened on July 25 for \$60,000 of 5 per cent. 20-year water, light and sewer bonds; de-

nomination \$500; dated September 1, 1911; maturity September 1, 1931. Address M. W. Pawnee, City Clerk.

Miss., Corinth.—Reported that \$10,000 of 5 per cent. 20-year Alcorn county road bonds have been purchased by John Nuveen & Co. of Chicago at 100.85. O. M. Hinton is County Clerk.

Miss., Ellisville.—Official: July 29 an election is to be held to vote on \$10,000 of school bonds. H. P. Gough is Clerk.

Miss., Ellisville.—Notice is given that an election is to be held July 29 to vote on \$10,000 of 6 per cent. 20-year school-building bonds. J. T. Taylor is Mayor and H. P. Gough City Clerk.

Miss., Iuka.—Notice is given that on August 10 the Board of Supervisors of Tishomingo County, P. W. Patterson, clerk, will sell at public auction \$35,000 of bonds; denomination \$500; interest not to exceed 6 per cent. The above is officially confirmed. W. L. Goodman is commissioner.

Miss., Lexington.—Official: Bids will be received until August 1 by the Mayor and Board of Aldermen for \$41,500 of water-works and \$21,000 of sewerage 5 per cent. bonds. R. E. Wilburn is City Clerk and H. S. Hooker Mayor.

Mo., Carrollton.—Reported that the Little & Hays Investment Co., St. Louis, has purchased \$230,000 of 6 per cent. bonds of Drainage District No. 3, Carroll county, at \$750 premium.

Mo., Charleston.—Official: Bids will be received until August 7 by A. R. Boone, Treasurer of Mississippi County, for \$240,000 of 6 per cent. bonds of drainage district No. 23. C. M. Davis is County Clerk; denomination \$1000; dated September 1, 1911.

Mo., Greenfield.—Reported voted: Water-works bonds.

Mo., Springfield.—November 21, it is reported, an election is to be held to vote on \$100,000 of sewer, \$100,000 of septic tank, \$100,000 of city hall, \$100,000 of bridge and \$75,000 of fire bonds.

Mo., Webb City.—Dispatches state that all bids received July 7 for the \$20,000 of 4 per cent. school district bonds were rejected.

N. C., Burnsville.—Reported voted: \$20,000 in aid of the Black Mountain Railway.

N. C., Charlotte.—Official: Bids will be received until noon August 14 by E. W. Thompson, chairman finance committee, for \$300,000 of 4½ per cent. 30-year water-works bonds.

N. C., Jonesboro.—Press dispatches state that the date for receiving bids for the \$10,000 of 5 per cent. 30-year graded school district bonds was postponed from June 5 until noon August 7. T. M. Jones is clerk Board of Commissioners of Lee County.

N. C., Robbinsville.—Notice is given that an election is to be held in Graham county August 15 to vote on \$50,000 of 4 per cent. 20-year bonds in aid of the Graham County Railroad. J. D. Jenkins is chairman Board of Commissioners of Graham County.

N. C., Spring Hill.—Spring Hill township is reported to have voted road bonds.

N. C., Weldon.—Official: An ordinance has been presented to the Board of Town Commissioners providing for an election the third Tuesday in September to vote on \$40,000 of water-works and sewerage bonds. W. W. Wiggins is Mayor and D. E. Stalnacke Clerk.

Okla., Comanche.—The Greer Investment Co. of Oklahoma City, Okla., purchased at par on June 26 the \$15,000 of 6 per cent. 20-year water-works extension and electric-light bonds; denomination \$1000; dated May 20, 1911; maturity May 20, 1931.

Okla., Custer.—D. E. McKenney, Town Clerk, will receive bids until July 14 for \$28,000 of water-works and \$12,000 of electric-light 6 per cent. 25-year bonds.

Okla., Duncan.—An official letter says that citizens of Stephens county are advocating bond issue for courthouse, jail and bridges, but at this time nothing definite decided. B. A. Barnes is County Clerk.

Okla., Indianola.—August 4, it is reported, an election is to be held to vote on \$12,000 of 6 per cent. 30-year water-works bonds; denomination \$500.

Okla., Maxwell.—Official: Speer & Dow purchased at par \$1500 of 6 per cent. school-house bonds; dated July 20, 1911; maturity July, 1931; denomination \$500.

Okla., Miami.—Official: R. J. Edwards of Oklahoma City purchased at par \$70,000 of school district building bonds; denomination \$1000; dated June 1; maturity 1936. Charles L. Hale is secretary School Commissioners.

Okla., Oklahoma City.—A. J. McMahan is reported to have been awarded \$40,000 of Oklahoma county 5½ per cent. 25-year bonds.

Okla., Oklahoma City.—Reported that bids

will be received until noon August 15 for \$1,750,000 of 5 per cent. public fund building bonds. Robert Dunlop is State Treasurer.

Okla., Pawnee.—Official: G. W. Little (Pawnee Bill) of Pawnee purchased at par and cost of issue, printing, election, etc., \$35,000 of 5 per cent. 20-year school-building bonds; denomination \$500; dated July, 1911.

S. C., Greenville.—August 8, it is reported, an election is to be held in Greenville county to vote on \$100,000 of courthouse bonds.

S. C., Greenville.—P. T. Hayne, secretary Board of Education, will, it is reported, receive bids until noon August 1 for \$40,000 of 5 per cent. 20-year school bonds.

S. C., Hartsville.—Official: The Legislature has authorized an issue of \$17,000 of bonds. It has been decided to issue \$15,000 of 5-10-year bonds in aid of the South Carolina Western Railway; interest not to exceed 6 per cent. Address F. A. Miller, Mayor. C. R. Rouse is Clerk. Press dispatches state the bids for same will be received until noon July 31.

S. C., Lexington.—July 20, it is reported, an election is to be held to vote on \$10,000 of bonds of Lexington School District No. 1.

Tenn., Brownsville.—Reported that all bids received July 10 for the \$40,000 of 5 per cent. 20-year street-improvement bonds were rejected. J. O. Bonner is Mayor.

Tenn., Chattanooga.—Breed & Harrison, Cincinnati, have been awarded at par, accrued interest and \$135 premium, \$45,000 of street-improvement bonds.

Tenn., Lookout Mountain.—An official letter says that a law has authorized the issuing of \$25,000 of bonds, but date for holding election has not yet been decided. F. H. Caldwell is Mayor.

Tenn., Memphis.—Official: Bids will be received until July 24 by the Board of Education, A. B. Hill, secretary, for \$250,000 of 4½ per cent. bonds for school buildings and grounds; denomination \$1000; dated July 1, 1911; maturity 1961.

Tenn., Rogersville.—A. B. Leach & Co., Chicago, are reported to have recently purchased \$20,000 of 6 per cent. 1-10-year Hawkins county road and bridge bonds.

Tex., Amarillo.—Official: July 25 an election is to be held to vote on \$25,000 of 5 per cent. 20-40-year paving and sewer bonds; denomination \$500; J. H. Patton is Mayor.

Tex., Anahuac.—Official: On June 10 Chambers county voted \$43,000 of 5 per cent. 40-year courthouse and jail bonds; denomination \$500; dated July 10, 1911. Address H. H. Jackson, County Judge.

Tex., Archer City.—Official: Bids will be received at any time by W. C. Young, Mayor, for \$12,000 of 6 per cent. 5-40-year water-works bonds; denomination \$500; dated July 1, 1911.

Tex., Atlanta.—The Cass County School Fund Commission is reported to have purchased \$1000 of 4½ per cent. 10-40-year water-works bonds. W. F. Cameron is secretary.

Tex., Austin.—The State Board of Education has purchased bonds as follows: \$7000 Jack county common school district No. 58, \$10,000 Garrison independent school district, \$3000 Rotan independent school district, \$4000 Como independent school district, \$8000 Sanger independent school district, \$4000 city of Gonzales schoolhouse bonds, \$2500 Port Lavaca schoolhouse bonds, \$1000 city of Bartlett schoolhouse bonds, \$6000 Winkler county courthouse bonds, \$1200 Galveston county common school district No. 11 schoolhouse bonds, \$3000 of 5 per cent. 20-40-year Honey Grove street-improvement bonds, \$3000 of 5 per cent. 10-20-year bonds of Fisher county common school district No. 6, \$3500 of 5 per cent. 10-20-year bonds of Young county common school district No. 42, \$3000 of 5 per cent. 5-40-year bonds of Grayson county common school district No. 45, \$57,000 of 5 per cent. Washington county improvement bonds, \$208,000 of 4½ per cent. 10-40-year Bexar county courthouse refunding bonds, \$1990 of 5 per cent. 10-40-year Bell county bridge-repair bonds, \$5000 of 4½ per cent. 10-30-year Trinity River bridge-repair bonds, \$43,000 of Orange county navigation bonds.

Tex., Bartlesville.—Official: Defeated: Washington county bonds.

Tex., Beaumont.—Official: August 11 an election will be held to vote on \$200,000 of 5 per cent. 20-40-year bonds as follows: School building, \$25,000; sewer, \$50,000; street improvement and repair bonds, \$25,000; jail, \$15,000; park, \$60,000, and abattoir, \$25,000; denomination \$1000. Address J. G. Sutton, City Secretary.

Tex., Belton.—Official: Defeated: Road bonds of Bell county. Hugh Harris is County Clerk.

Tex., Brady.—Official: Road District No. 1, McCulloch county, on June 3 voted \$75,000 of 40-year road-improvement bonds; denomi-

nation \$1000; dated June 12, 1911. Address Harry Waller, County Judge.

Tex., Brownsville.—Reported that bids will be received until August 1 by Wm. J. Russell, City Attorney, for \$15,000 of electric-light improvement, \$80,000 of street-improvement and \$35,000 of water-extension bonds.

Tex., Bruceville.—Reported voted: \$5000 of independent school district bonds.

Tex., Canadian.—Reported voted: \$65,000 of school bonds.

Tex., Childress.—Reported that an election is to be held to vote on \$50,000 of road bonds of Commissioner's Precinct No. 1, Childress county.

Tex., Cuero.—August 7, it is reported, an election is to be held to vote on \$1000 of school bonds.

Tex., Gorman.—Bids will be received until noon August 1, it is reported, by D. G. Stevens, secretary School Board, for \$30,000 of 5 per cent. 20-40-year school bonds.

Tex., Harrisburg.—Reported voted: \$15,000 of school district building bonds.

Tex., Henrietta.—Official: August 5 an election is to be held to vote on \$200,000 of 5 per cent. 20-40-year Clay county road bonds. Address County Judge.

Tex., Mt. Pleasant.—Official: Bids will be received by the City Council until 5 P. M. August 8 for \$16,000 of 5 per cent. 30-year sewerage bonds; denomination \$250; dated June 15, 1911; J. V. Moore is Mayor.

Tex., New Braunfels.—Reported voted: \$67,000 of water-works bonds. C. A. Jahn is Mayor.

Tex., Port Neches.—J. T. Sluder & Co., San Antonio, are reported to have purchased at par and accrued interest \$20,000 of school district bonds.

Tex., Port Arthur.—Official: An election is to be held July 18 to vote on \$75,000 of drainage and \$100,000 of street-improvement bonds. W. H. Gililand is commissioner public property and improvements.

Tex., Pilot Point.—Official: Bids are being received for \$5000 of 20-year independent school district bonds; denomination \$100. Address J. B. Pondron, secretary Board of Education.

Tex., Raymondville.—Press dispatches state that \$200,000 of road-improvement bonds of Cameron County Road District No. 1 voted June 24 have been declared void.

Tex., Richmond.—Reported voted: \$30,000 of Fort Bend county high-school building bonds.

Tex., Sherman.—The \$20,000 of water, \$7000 of school and \$5000 of street-improvement 5 per cent. bonds are reported to have been awarded to A. B. Leach & Co., Chicago at \$600 premium.

Tex., Van Horn.—Press dispatches state that an election is to be held in Culberson county to vote on \$75,000 of courthouse and jail bonds.

Tex., Waco.—Reported that bids will soon be asked for \$200,000 of sewer, street and school bonds.

Tex., Waldrip.—Reported that \$3000 of school district building bonds were recently voted.

Tex., Wichita Falls.—Wichita county is reported to be considering the question of issuing \$200,000 of road bonds.

Va., Chatham.—Press dispatches state that J. D. Jones of Chatham recently purchased \$9000 of 5 per cent. 30-year school bonds at par. W. M. Tredway, Jr., is clerk of Council.

Va., Danville.—Reported voted: \$150,000 of electric-plant and \$30,000 of street-paving bonds; interest not to exceed 5 per cent.

Va., Norton.—Press dispatches state that Henry Nuveen & Co. of Chicago have concluded final negotiations for the purchase of \$20,000 of sewer and \$40,000 of street-improvement bonds.

Va., Suffolk.—July 29, it is reported, an election is to be held in Sleepy Hole District to vote on \$16,000 of school bonds.

W. Va., Clarksburg.—Official: July 25 an election is to be held to vote on \$275,000 of 5 per cent. 30-year school bonds; denomination \$1000; dated September 1, 1911; maturity September 1, 1941. Address J. N. Hess, secretary.

W. Va., Grafton.—Official: July 29 an election is to be held to vote on \$19,000 of 4½ per cent. 10-34-year school district building bonds; dated September 1, 1911; date of opening bids not yet decided; W. Merle Watkins, secretary Board of Education.

W. Va., Hinton.—Official: An election is to be held in Talcott district, Summers county, August 5 to vote on road bonds.

[For Additional Financial News, See Page 80.]

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1027-1033 Calvert Building BALTIMORE, MD.
BRANCH—Monticello Arcade Building, Norfolk, Va.

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212-213 National Bank Building
SAVANNAH, GA.
Long Distance Phone
References—Any Bank in Savannah

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We will promptly consider applications from progressive, well established industries, steam and electric railways and public service corporations.

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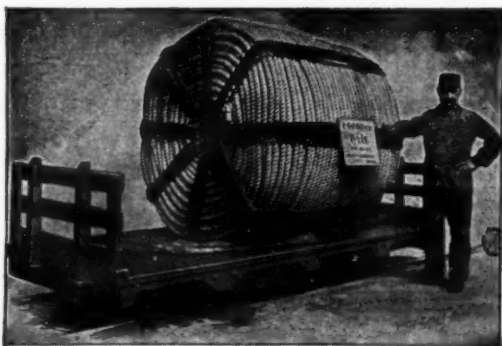
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Established 1884.

A. H. S. POST, President

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IF you plan, design, erect or operate power transmission appliances, you will be well repaid for investigating the manifold advantages and economies of

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"AMERICAN" TRANSMISSION ROPE

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NOTICE.—If you have a problem in power transmission our engineering department will be glad to go into the details with you. This service is extended absolutely without cost to prospective customers.

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TRANSMISSION ROPE

W. Va., Huntington.—Reported that all bids received July 11 for the \$300,000 of 4½ per cent. 20-30-year Cabell county road improvement bonds were rejected.

W. Va., Wellsburg.—Official: Bids will be received by the Board of Education of independent district of Wellsburg, Brooke county, Elmer Hough, president, until noon August 15 for \$85,000 of 5 per cent. 10-34-year bonds; denomination \$500.

At Charlotte, N. C., bids will be received until noon August 14 for \$300,000 of 4½ per cent. 30-year water-works bonds. Further particulars will be found in the advertising columns.

At Wellsburg, W. Va., bids will be received until noon August 15 for \$85,000 of 5 per cent. independent school district bonds; denomination \$500. Further particulars will be found in the advertising columns.

At Lexington, Miss., bids will be received until August 1 for \$41,500 of water-works and \$21,000 of sewerage 5 per cent. bonds. Further particulars will be found in the advertising columns.

At Mt. Pleasant, Tex., bids will be received until 5 P. M. August 8 for \$16,000 of 5 per cent. 30-year sewerage bonds. Further particulars will be found in the advertising columns.

At Pensacola, Fla., bids will be received until 10 A. M. August 15 by the County Commissioners of Escambia county for \$180,000 of 4½ per cent. bonds. Further particulars will be found in the advertising columns.

FINANCIAL NOTES.

The Bank of Elloree, at Elloree, S. C., according to press dispatches, has increased its capital from \$15,000 to \$25,000.

A condensed statement of the Witham Banks, February, 1911, shows total resources, \$13,034,569; capital stock, \$2,028,500; net profits, \$800,066; deposits, \$10,044,392.

The Commercial Bank, Jacksonville, Fla., is reported to have opened a branch at Florida Ave. and Grant St. in East Jacksonville. C. E. Straton is in charge.

The Grant County Bank and the State Bank of Medford, both at Medford, Okla., are reported to have consolidated under the name of the former institution; capital \$15,000. W. J. Gardiner is president.

The Virginia-Carolina Chemical Co., Richmond, Va., has declared a dividend of 3 per cent. on its common stock, payable 1½ per cent. August 15, 1911, and 1½ per cent. February 15, 1912. S. W. Travers is treasurer.

The First National Bank and the Oklahoma National Bank, both at Tulsa, Okla., according to press dispatches, have consolidated under the name of the First National Bank; capital \$125,000. Grant R. McCullough is president.

A condensed statement of State, private and savings banks in North Carolina at close of business June 7, 1911, shows total resources, \$63,210,703; loans and discounts, \$46,907,672; due from banks and bankers, \$7,173,685; capital stock paid in, \$9,308,112; surplus fund, \$2,122,996; undivided profits, \$2,127,256; total deposits, \$45,415,427; due to banks and bankers, \$847,802.

At the annual meeting of the West Virginia Bankers' Association, held at White Sulphur Springs July 11 and 12, the following officers were elected for the ensuing year: President, W. Wylie Beall, president Commercial Bank, Wellsburg; vice-president, Mason Matthews, president Bank of Lewisburg, Lewisburg, W. Va.; secretary and treasurer, Joseph S. Hill, City Bank, Charleston.

A condensed statement of 124 State banks including trust companies and savings institutions, shows loans and discounts, \$34,261,832; due from other banks, \$17,504,838; currency and national bank notes, \$1,844,042; capital stock paid in, \$12,159,288; surplus fund, \$16,528,173; undivided profits, less expenses, \$5,365,939; due to other banks, \$2,908,976; demand and time certificates of deposit, \$159,321,836.

The Bank of Commerce, located at 307 E. Broad St., Richmond, Va., and conducted as a branch of the Bank of Commerce and Trusts, has, according to press dispatches, been purchased by a syndicate headed by Charles Hutzler and will be converted into a national bank. Among those interested are James O. Scott, Walter P. Smith, James R. Gordon, Henry W. Rountree, M. Thalhimer and Henry Haase.

At the annual meeting of the North Carolina Bankers' Association, held at Lake Kanuga, Hendersonville, June 21, 22 and 23, the following officers were elected for the ensuing year: President, J. C. Braswell, Rocky Mount; first vice-president, Leake S. Covington, Rockingham; second vice-president, George W. Holderness, Tarboro; third vice-president, Thos. E. Cooper, Wilmington; secretary, W. A. Hunt. Capt. J. P. Sawyer was elected vice-president for North Carolina and J. Elwood Cox of High Point was elected executive council to the American Bankers' Association.

PROPOSALS.

Advertisement for Bids on Plaquemine High School

The School Board of the Parish of Iberville will open bids at the Courthouse at the hour of ten o'clock A. M. August 12, 1911, for the erection of a three-story brick school building to be erected at Plaquemine, La., for said School Board.

Bids must be sealed and addressed to Hon. Jos. Wilbert, President School Board, Parish of Iberville, Plaquemine, La., and must be accompanied by certified check for \$1000, made payable to Joseph Wilbert. The proceeds of said check to become the property of the Parish School Board as and for liquidated damages if the bidder to whom this contract is awarded fails or refuses to execute contract and bond required. Checks submitted by unsuccessful bidders will be returned after approval of contract and bond executed by successful bidder.

Successful bidder will be required to give bond in accordance with law within five days of the signing of contract, to secure the performance of the work, and agree in his contract to a \$25 per diem forfeit to the owner as and for liquidated damages for each and every day he may be delinquent in the execution of his contract.

Plans and specifications may be secured on application at the office of the Superintendent of Education, Plaquemine, La., or from the Architects, Messrs. Stevens & Nelson Co., 1109 Hennen Bldg., New Orleans, La. The School Board reserves the right to reject any or all bids.

VIRGINIA-CAROLINA CHEMICAL CO.

Office of Treasurer,
Richmond, Va., July 11, 1911.

The Board of Directors of Virginia-Carolina Chemical Co. have this day declared a dividend of three per cent. (3) on the Common Stock of the Company, payable 1½% on August 15, 1911, and 1½% on February 15, 1912, to stockholders of record on August 4, 1911, and February 3, 1912.

For the purpose of said dividend the Common Stock Transfer Books will be closed from 3 P. M. on Friday, August 4, to 10 A. M. on Wednesday, August 16, 1911, and from 12 M. on Saturday, February 3 to 10 A. M. on Friday, February 16, 1912.

S. W. TRAVERS, Treasurer.

C. C. McDONALD

Investments, Stocks and Bonds

RALEIGH, N. C.

NORTH CAROLINA STATE BONDS MY SPECIALTY
Quick Sales and Small Profits is my Motto.

GO SOUTH!

FOR SALE—Timber, Phosphate, Coal, Iron, Farm, Ranch, and Other Properties and Investments, in Southern States, Cuba and Mexico.

SOUTHERN STATES DEVELOPMENT CO.
GEO. B. EDWARDS, President,
Tribune Bldg., 154 Nassau St., New York, N. Y.
Connections in the Principal Cities of Europe.

"Quincy-Made" Office Furniture

Means the highest quality—the greatest worth—the best satisfaction. Our designs are practical, original, substantial. Prices very reasonable. Write for Catalog No. 20.

QUINCY SHOW CASE WORKS, Quincy, Ill.

SURETY BONDS

Fidelity and Deposit Co.

OF MARYLAND

Home Office, BALTIMORE, MD

Assets Over \$5,000,000

Pioneer Surety Co. of the South.
Becomes Surety on bonds of every description.

AGENTS IN ALL PRINCIPAL CITIES
HARRY NICODEMUS, EDWIN WARFIELD,
Sec'y and Treas. President.

I want to hear from Commercial Clubs, Communities, or Corporations which desire Interurban Railways or Electric Power Plants developed, financed and built in their vicinities.

Two projects developed according to my system THIS YEAR are going ahead to success.

My work is done on a commission basis and by legitimate methods. Highest references on request.

Write me NOW.

E. F. WHEATON

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Henderson, Kentucky

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SUFFERN & SON

CERTIFIED PUBLIC ACCOUNTANTS

NEW YORK

ANNOUNCE THAT THEY HAVE OPENED A BRANCH OFFICE IN

BIRMINGHAM, ALA.

FIRST NATIONAL BANK BUILDING

Do You Ship Goods To the South?

We can save you the difference between carload and less than carload freight. We give you the advantage of a branch office at nominal expense.

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CONSOLIDATED COTTON DUCK CO.

Manufacturers of

"Woodberry," "Mt. Vernon," "Ontario," "Aretas,"
"Laurel," "Druid," "Greenwoods," "Polhemus,"
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SAIL, WIDE, ARMY AND OUNCE DUCK

Sheetings, Drills, Twills, Bunting, Grain Bags, Osnaburgs, Wick,
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An Ideal Manufacturing Point
and Distribution Center is

SAVANNAH

Manufacturers and business men generally who require a well located distributing center to reach the Carolinas, Georgia, Florida and Alabama, and Central South, should investigate carefully the advantages of Savannah. Splendid transportation facilities, rail and water, warehouses, labor.

Savannah's export trade is \$65,000,000.

THE NEW BUILDING OF THE SAVANNAH BANK & TRUST CO.

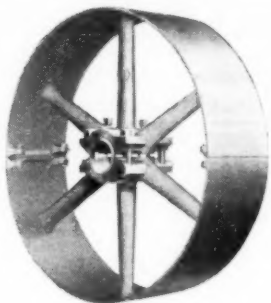
Fifteen stories, which is nearing completion, will be headquarters for business men and corporations that require up-to-date, modern and well equipped offices, either single, suites and floors. No extras, all services covered by the rent rate, which is moderate.

For full particulars covering Savannah for manufacturing, distributing, business headquarters and residence, write

GEORGE A. MERCER

116 Bull Street

SAVANNAH, GA.



"Standard"
Split Iron Pulley



The Line that Sells is the Line that Gives Service

MATERIAL, design, construction and finish enter into the necessary qualities to produce this.

At the great Dodge machine shops and foundries, Mishawaka, Ind., the designing, the construction, the finishing are in the hands of masters.

Every pulley, every hanger, every bearing, every clutch, every collar, every coupling, every piece of shafting—in fact, every article delivered to the warehouse and shipping depot, bears the stamp of expert attention and approval.

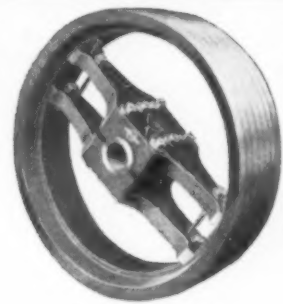
The Dodge line is the one perfect type of power transmission machinery. It is interchangeable, it is standardized.

That is why many of the largest manufacturers in the country have decided upon it as their standard—the Corn Products Refining Co.; the Buick Motor Co.; Postum Cereal Co.; Morgan & Wright and others.

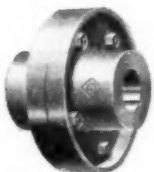
That is why many of the largest supply houses in the country are carrying the goods in stock.

That is why you should know more about it.

We have splendid literature covering The Dodge Idea of making and operating pulleys, clutches, hangers, bearings, collars, couplings, rope drives, water softeners, etc., for the asking.



"Independence"
Split Wood Pulley



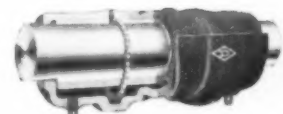
Dodge Flange
Coupling



Capillary Self-Oiling
Bearing



Ribbed Compression
Coupling



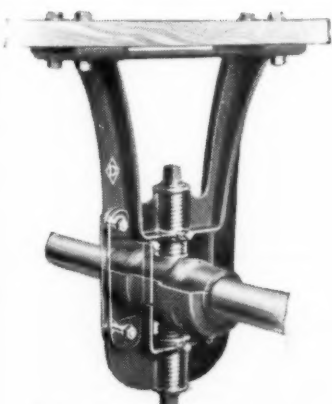
Self-Oiling Chain
Bearing



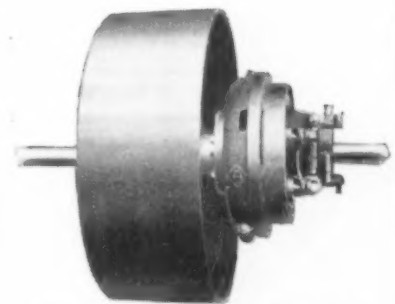
Safety Collars
Solid and Split



Self-Oiling Ring
Bearing



Ball and Socket Shaft Hanger
with Self-Oiling Bearing



Split Friction Clutch in Combination
with Split Iron Pulley

Dodge Manufacturing Company

General Offices and Works: Mishawaka, Ind.

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New York, Cedar and Washington Sts.
Cincinnati, 126-128 W. Third St.
Chicago, 202-214 S. Clinton St.
Boston, 137-139 Purchase St.
Brooklyn, 37th St. and Second Ave.

Minneapolis, 202-04 Third St. S.
Atlanta, 54-60 Marietta St.
Philadelphia, 815 Arch St.
St. Louis, 507 N. Main St.
Pittsburg, 337 Second Ave.

Classified Opportunities

AGENCIES WANTED

WANTED—State (Va.) agency for machine, implement or manufactured article; good location; traveling experience; reference or bond. Address "C," A-First, Gainesborough Apt., Roanoke, Va.

MEN WANTED

WANTED—Agents to sell automobile specialty which every auto owner needs; quick seller; big profits; particulars free. D. Wilkinson, Falco, Ala.

WANTED—Traveling or local men; all sections of the country; profitable side line; commission or salary; good men average \$100 weekly. For particulars address The Sun Chemical Company, Richmond, Va.

SALESMEN.—To sell high-grade driers and paint oil on commission basis. State territory. Address Box 135, Collinwood, Ohio.

HUSTLING manufacturers' agents who are acquainted with the architects wanted to represent an absolutely sanitary line of fast-selling bathroom supplies. A rare opportunity for reliable agents. References required. Sanitary Ware Mfg. Co., Newark, N. J.

A NEW ENGLAND MANUFACTURER of machinists' supplies wants a representative in Atlanta, New Orleans or some central distributing point in the South. Their product has a fine sale in the South, and a capable man will have an excellent opportunity. Address No. 814, care Manufacturers Record.

WANTED—Real salesmen acquainted with building and contract work to handle concrete mixers. The American is a batch mixer giving a perfect mix either wet or dry. It is sold under a liberal commission arrangement without requiring any financial investment by the agent. A good seller in other sections and should prove attractive in the South with pushing. Address Cargill Mfg. Co., 567 Buttle Ave., Columbus, O.

HAVE you had experience in the sale or operation of gas or gasoline engines? We want a live dealer in your county. Full protection will be given. Write for our proposition and catalogue No. 25, which illustrates Otto engines from 1 to 300 H. P. The Otto Gas Engine Works, 3221 Walnut street, Philadelphia, Pa.

WANTED—Superintendent, about 30 to 35 years of age, for ornamental and structural iron works; must have initiative and push; state age, experience and salary; also give references as to character and ability. Address No. 816, care Manufacturers Record.

WANTED—Experienced canner to take charge canning plant; small capital required; good proposition for right man. Box No. 65, Cuba, Ala.

A NEW AND UP-TO-DATE MACHINE SHOP AND FOUNDRY with an investment of \$150,000 wants a No. 1 business manager with \$10,000 to invest to take bonds for his money and a gift of an equal amount of common stock. We have a line of machinery yielding big returns, but need a manager. Address No. 812, care Manufacturers Record.

WANTED—A general manager who can invest from \$3000 to \$5000 in an incorporated real estate company. This is the opportunity of a lifetime for the right man; money needed for the purchase of other properties. Box 525, Montgomery, Ala.

MANAGERS wanted in every county to manufacture and sell Magic or Radio Vapor Spray. We will supply an energetic man (who can handle sole agents) with the secret formula and the sole right to market our sprays in any county in the Union for \$100. \$5000 to \$10,000 year can be easily and honestly made. Full particulars with testimonials from the Southern Spray Company, 5 N. 7th St., Richmond, Va.

EXPERIENCED CEMENT SALESMAN acquainted with trade in New York State and New England territory. State age and salary required. Address "Cement," care of Manufacturers Record, 52 Broadway, New York, N. Y.

AUTOMOBILE MOTOR PLANT requires capital and manager; offers a fine chance for man with money and ability; could take plant to any place desired. Investigate this. Address "Motor," care Manufacturers Record.

SITUATIONS WANTED

EXTRA GOOD mill supply and machinery man, 37 years old, now manager prominent South Atlantic house, desires change; traveling position considered. Address No. 815, care Manufacturers Record.

WANTED—Position as manager, superintendent or mechanical engineer with progressive machine company; first-class man; will accept part salary in stock of company. Address No. 813, care Manufacturers Record.

WANTED—Connection with a corporation as secretary-treasurer, office manager, auditor, purchasing agent, by a gentleman of extensive business experience and of highest integrity; AAA-1 references. Correspondence requested. Address No. 810, care Manufacturers Record.

WANTED—Position as draftsman, estimator and general office man in general contractor's office; young man; have had experience and can furnish references. Address No. 821, care Manufacturers Record.

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.

WIDELY EXPERIENCED electric-light, telephone and water-works manager, business getter and construction man desires to change to a city up to ten thousand population with good schools, churches and business opportunities; will design and build new or rejuvenate the old plant to give reliable service and build up and manage the business in a simple and effective manner; am now and have been for the past six years in absolute charge of an exceptionally fine \$150,000 water-works, electric-light and telephone plant as general manager; am a licensed engineer and machinist; can handle men and gain and hold the good-will of employees and customers; am in the highest standing with the present company, and the only reason for making a change is to secure better schooling advantages for the children. Write me fully and I will tell you what can be done. Address No. 820, care Manufacturers Record.

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RENSSELAER POLYTECHNIC INSTITUTE, TROY, N. Y.—Courses in Civil, Mechanical and Electrical engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Bachelor of Science (B.S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

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COMMERCIAL STATE BANK, Birmingham, Ala. State depository. Prompt attention to Alabama collections.

THE PALMETTO NATIONAL BANK, Columbia, S. C., capital \$250,000, solicits accounts of banks, firms, corporations and individuals, either commercial or savings accounts.

BUSINESS OPPORTUNITIES

IF YOU have timber lands and cut-over for sale, list them with me. I will find a buyer. B. I. Hazard, 439 Front St., Georgetown, S. C.

SOAPSTONE FOR SALE.—Majority interest in quarry and machinery; quality of stone is good and plant is nearly new. Address No. 819, care Manufacturers Record.

THE SOLE RIGHTS of marketing Radium Spray, together with the secret formula for manufacturing the same in the States of Missouri and Kansas and the southern portion of Illinois. Apply Southern Spray Co., 5 N. 7th St., Richmond, Va.

FOR SALE—Half interest in saw and planing mill; long-leaf yellow pine timber; good chance for a man that understands mill and lumber business. C. W. Smith & Son, Plymouth, Fla.

FOR SALE AT A BARGAIN.—One of the best and most up-to-date marriage-repair shops in the Southwest, doing thirty-five thousand dollars' worth of business per year. Sickless is the only reason for selling. Pitts Land & Developing Co., Houston, Tex., Room 1, Kiam Bldg.

INVESTMENTS—FARMING—HOUSTON—YOUR OWN WELFARE.—If you are interested in either of these, kindly send ten cents for a copy of the Practical Farmer. It will astonish you. It will give you pointers on the best, safest and easiest investment in the United States today. H. S. Taylor, Scanlan Bldg., Houston, Texas.

GREAT SACRIFICE SALE.—Gates Hotel, Hendersonville, N. C.; 138 sleeping-rooms; handsomely furnished; celebrated summer resort; all-year-round climate; good patronage; owner, old man, wishes to retire; worth investigating; also, several tracts land suitable for colonizing. P. A. Hodges, Hendersonville, N. C.

GOLD-MINING PROPERTY FOR SALE.—We have a valuable gold-mining property for sale, located in Gilpin county, Colorado, 39 miles from Denver. This property consists of 26 claims and a twenty-stamp mill. The assay shows 540 per ton. Price for mill and property is \$40,000. For full particulars address R. T. & E. M. Wilson, 216 Sixth Ave., N., Nashville, Tenn.

A SPLENDID OPPORTUNITY for investment is offered parties in position to take \$5000 or \$10,000 in stock company now being organized to operate a clayworking industry at a point possessing the best of advantages for the manufacture of vitrified products. Associated with the enterprise are strong business men successful in other lines, as well as practical and experienced men upon whom the management will devolve. Plant will be most complete and equipped for the handling of its materials at the least cost of manufacture. For further information refer to file No. 13,246 and address M. V. Richards, Land and Industrial Agent, Southern Railway, 1375 Pennsylvania Ave., Washington, D. C., or Chas. S. Chase, Western Agent, Room 700 Chemical Building, St. Louis, Mo.

DAVIS, SWANN & GORDON, San Antonio, Texas, General Brokers, will entertain offer for exclusive agency of reliable manufacturers. We are located in the fastest growing district of the Southwest; will have large quantities of cotton-tie clippings for sale, also brewers' rice, compress patches, bagging and ties. References.

TYPEWRITERS

ENTERPRISE EXCHANGE, INC., 609 E. Baltimore St., Baltimore, Md.; remanufactured typewriters, all makes; three days' examination allowed; catalogue upon request; full line of ribbons, carbons and papers.

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FREE SITES and other liberal assistance; cheap fuel; natural gas, oil, coal and abundant water; six railroads. Address Chamber of Commerce, Wichita Falls, Texas.

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COLEMAN, TEXAS, wants a brick plant; has an unlimited supply of the finest material, with cheap labor and fuel, with an unlimited market for the output in an unoccupied territory. Coleman Commercial Club.

HOTEL

COLEMAN, TEXAS, a hustling town of five thousand, located on the main line of the Santa Fe, in the best and richest section of Texas, wants a first-class modern hotel of about fifty rooms; a two-fifty per day house. An excellent opportunity for someone to get a good thing. Coleman Commercial Club.

MISCELLANEOUS

CAPITAL FOR MANUFACTURING PLANTS.—We will take liberal stock in manufacturing plants located in Oxford, N. C.; active support to all worthy propositions. Ask for particulars as to desirability of location. Confidential inquiries solicited. Granville Real Estate & Trust Co., A. H. Powell, President, Oxford, N. C.

SUFFOLK.—The best manufacturing and distributing point in Virginia; six railroads and water transportation; plenty of labor; cheap fuel; electric power; seventy manufacturing plants in successful operation; opportunity for furniture and woodworking plants and any wholesale, jobbing or manufacturing business; center of tidewater; richest farming section to be found; healthy; excellent schools and churches; filtered water, gas and sewer. Write Board of Trade, Suffolk, Va.

CLEVELAND, TENN., WANTS YOU.—The best town in the Southeast, with a hydro-electric development of 32,000 initial horsepower for manufacturing purposes, final development 82,000 horsepower. Free manufacturing sites; exemption from city and county taxes; ample railroad facilities; spring water pumped to all parts of the city; cheap raw materials; 186 miles of pike roads in county; fine farming and trucking section; best of public utilities; cheap white labor; cheap power; ideal location for cotton mill, furniture factory and brick-manufacturing plant; good climate; most rapidly developing city in the Southeast. Write Commercial Club, Cleveland, Tennessee.

"BUSIEST AND BEST BUILT CITY IN TEXAS," Wichita Falls, possesses unsurpassed natural resources and advantages. Offers exceptional opportunities for investors; free sites for manufacturing establishments; cheap fuel; natural gas, oil, coal, electricity and abundant water from the largest body of water in Texas; six railroads; raw material at hand; latest approved public utilities; creosoted wood block pavement throughout business section; over fifty miles concrete sidewalks. Most rapidly developing city in Southwest. Handsome booklet and detailed information upon request. Address Chamber of Commerce, Wichita Falls, Texas.

ASHEVILLE, N. C.—Delightful all-year-round climate; center of hardwood forests of Southern; abundant hydro-electric power; 31,000 population; 40 miles paved streets; cheap, reliable labor; wants spoke and handle factory; furniture factory; wagon factory. Also wants man with some capital to invest in established manufacturing enterprise with services. Write Board of Trade, Asheville, N. C.

VICTORIA, TEXAS, head of navigation of Guadalupe River; center of cotton, corn, truck and citrus fruit-growing district of South Texas; country rapidly developing; opportunities for many industries. If interested in the coastal section of Texas, write for booklet "D" to the Secretary of the Progressive League.

INDUSTRIAL PLANTS FOR SALE

PLANING MILLS

FOR SALE BY OWNER.—A well-established lumber yard and planing mill, doing a good business, located in a town of 4000, junction of two railroads; two-story mill building with complete machinery; large sheds filled with a good and carefully selected stock of lumber; cement-block-making plant; six-room dwelling; one and one-half acres of land; buildings and machinery in first-class condition; \$12,000 buys entire plant and stock; big bargain for little money; must sell on account of ill-health. Address F. Preston Jones, Basic City, Va.

FOR SALE OF EXCHANGE—PLANING MILL.—For sale on easy terms, or will exchange for lumber, planing mill consisting of two Berlin 6x15 machines, cut-off saws and all necessary equipment; 100 H. P. engine; will give possession August 15, 1911; mill can be seen in operation daily. Write for further particulars to W. C. Schwem, Hammond, La.

BAND MILL

COTTONWOOD AND BAND MILL PROPOSITION.—We are offering for sale our entire plant, consisting of band mill and river equipments. An ideal cottonwood proposition, and by adding a box factory it will make one of the best locations in the South. For further information address Shreveport Cottonwood Co., Ltd., Shreveport, La.

LUMBER MANUFACTURING PLANT

FOR SALE—Complete lumber manufacturing plant, consisting of two-band-saw mill, planing mill, box factory, oak-flooring plant, drykiln, office, store, blacksmith shop and thirty-five dwelling-houses, besides sheds, barn, corner, icehouse, etc.; about forty to forty-five acres of river bottom land, exclusive of the buildings; situated at the crossing of the Kentucky River and L. & N. Railroad. Parties quitting business for private reasons and will sell at a remarkable bargain price. For full particulars address The Burt & Brabb Lbr. Co., Ford, Ky.

UNDERWEAR FACTORY

UNDERWEAR FACTORY FOR SALE in a live and important city in the Southeast; 3-story brick building 200 feet by 60 feet; 4 hydrants and large tank; 2 steam elevators; in good repair; switch to factory from main line of Southern Railway system; no incubance. Terms: \$12,500; one-half cash; balance easy payments. This factory is suitable for any kind of textile plant; fine opportunity; convenient to cheap coal supplies; excellent location. For particulars refer to File No. 13,307 and address M. V. Richards, Land and Industrial Agent, Southern Railway, 1375 Pennsylvania Ave., Washington, D. C., or F. E. Resler, Agent, Columbus, Mississippi.

ROLLER MILL

ROLLER MILL at Imboden, Arkansas, Lawrence county, for sale or trade, or will give terms. This mill is in a splendid location for business. Write Robert L. Knie, Cordell, Okla.

COTTON MILL

FOR SALE—A modern, up-to-date cotton mill, located in Northeast Georgia; 700 spindles; in first-class condition, ready to operate. For further particulars address Dixie Lard & Investment Co., 16 Steiner Bldg., Birmingham, Ala.

LIGHT, ICE AND WATER-WORKS PLANT FOR SALE—Electric-light, ice plant and water-works plant in bustling Florida town of 2500 inhabitants; business will pay from 12 to 15 per cent. on investment required. Apply to S. S. Sandford, Jasper, Fla.

WATER, LIGHT AND ICE PLANT

WATER, LIGHT AND ICE PLANT, will clear \$12,000 per year, for sale. R. L. Workman, Everton, Ark.

AGRICULTURAL IMPLEMENT FACTORY FOR SALE—A well-known and thoroughly established agricultural implement business of thirty years' standing, netting about \$25,000 annually and safely situated in central Ohio. Price about \$110,000, depending on inventory. Specially desirable for young man to develop and increase by energy and judgment. Apply Leonidas B. Boyd, 103 Reynolds Bldg., Gary, Ind.

COFFIN AND CASKET HARDWARE

FOR SALE—Coffin and casket hardware plant, or will sell all machinery separately; as good as day bought; not in use over three months; best reason for sale. For full particulars address E. E. Stallings, Enfield, North Carolina.

SOAPSTONE QUARRY

SOAPSTONE QUARRY AND MACHINERY FOR SALE.—Quarry of good soapstone with ledge over 100 feet wide, located in Virginia, and equipped with machinery for preparing blocks, slabs, laundry tubs, etc. Address No. 818, care Manufacturers Record.

TIMBER ESTIMATOR

TIMBER ESTIMATES—LOW COST.—Any timber tract in South Atlantic or mountain States will be estimated at lowest cost. Method used is new and shows details that can be checked. Accuracy guaranteed. Send for sample report explaining method. A preliminary estimate may save you useless expense. C. A. Divine, Franklin, N. C.

Classified Opportunities

REAL ESTATE, MINERAL AND TIMBER LANDS, WATER-POWERS, ETC.

FOR SALE—A good flouring mill; also good stock, grain and fruit farms; also fine timber tracts; one good farm, will take merchandise as part pay. Hindsville Realty Co., Hindsville, Ark.

BEAUTIFUL LAKE BUTLER LOTS are offered for a limited time on special terms. Until September 1, 1911, we offer a 10-acre lot on Lake Butler Heights (Tarpon Springs section) for \$25 as first payment, and if purchaser dies before purchase payments are completed, will give to your heirs or assigns a warranty deed for lot absolutely free. If you want a bargain and a home in the most desirable part of Florida, write now for particulars and reservation. Tampa & Tarpon Springs Land Co., Tampa, Florida.

15,000 ACRES center Bailey county, Texas; 56 per cent. choice smooth agricultural land; railroad graded to center of tract; splendid rail route location; abundance pure water 18 to 100 feet; irrigation from pumping. Price \$12.50 per acre; easy terms; double money in short time. Hann & Kendall, Dallas, Texas.

FACTORY SITES, Business Property, Residences and Farms. If interested in the metropolis of the Southwest or its territory, write for free land list and booklet on Houston, Texas (where 17 railroads meet the sea), or make your wants known. Bank references if desired. Central Land Co., 303 Theater Bldg., Houston, Texas.

\$50,000,000 IN THREE YEARS—Invest in Washington real estate. As the nation grows so must its capital city develop. The increased value of Washington real estate in the past three years was approximately \$50,000,000. Did a portion of this represent your profits? We are now placing on the market one of the best-located subdivisions in the choice northwest section, fronting one mile on Sixteenth street, and overlooking the National Rock Creek Park. The future of this section will make this the best investment in the suburbs of the national capital. For plat and full information apply to Robert E. Heater, 411-412-413 Colorado Building, Washington, D. C.

SHIP CHANNEL FRONTAGE—1800 acres fine black prairie land between Houston and the bay, fronting 1 1/2 miles on Houston Ship Channel; small amount of beautiful timber along water frontage; high banks; Southern Pacific Railroad and Houston-Bay Shore shell road through south edge of property; railroad station on land; high and well drained; beautiful factory or residence townsite; strictly first class in every particular. Address Dr. C. S. Preston, 1007 Scanlan Bldg., Houston, Texas.

MINERAL LAND FOR SALE
WE ARE IN CONTROL, fee delivery (titles perfect), of large boundaries in Tennessee coal, iron and mineral belt. Surveys 70,000 to 90,000 acres, convenient to transportation, having on it and near all the raw material needed for manufacturing purposes, good bituminous, domestic and coke-making coal; veins show large average tonnage per acre and easy mining out, and abundance of high-grade iron ores. These valuable holdings can be delivered at comparatively low figures, one-half of what it is in reality now worth, to genuine buyers who can show ratings or bank references to warrant the ability to promptly take over these lands. None but principals need reply. Open bargain to direct buyers. Address J. C. Lindley, Greensboro, N. C.

KENTUCKY FLUORSPAR LAND (See Manufacturers Record, July 13, page 52).—400 acres unprospected mineral land, three miles from Marion; contains also good stone quarry; will sell cheap. Address Room 908, 35 Liberty street, New York.

TIMBER LAND FOR SALE
2000-ACRE BARGAIN—HARDWOOD TIMBER—Rich bottom land, East Texas; fine proposition for a sawmill; two railroads; switch on land; near town; need money quick; sacrifice; no trade. J. L. Farley, owner, DeSoto, Mo.

TIMBER LANDS FOR SALE—16,000 acres virgin hardwood timber lands, average over 6000 feet, located in Virginia; also, narrow-gauge steam railway, fully equipped; bargain to prompt purchaser. Frank Van Sant, 52-54 Davidson Bldg., Washington, D. C.

10,000 ACRES of choice long-leaf yellow-pine timber and lands at \$12.50 per acre that will average 5000 feet; it's on and near Y. & M. V. Railroad. J. C. Ford, Summit, Miss.

80,000 ACRES VIRGIN PINE TIMBER LANDS for sale. P. O. Box No. 133, Quincy, Fla.

SOUTHERN TIMBER LANDS.—Large tracts of pine, cypress and hardwood all over the South. James & Colby, Galveston, Texas.

35,000 ACRES virgin hardwood timber land, located in S. E. Ark., between the Miss. and White Rivers; railroad through land; about 23,250,000 feet; estimate upon request. Price \$12.50 per acre; terms, one-third cash. 14,750 acres Arkansas cut-over timber land; \$2.50 per acre; terms, one-third cash. Robert Sessions, Winthrop, Ark.

CUT-OVER LANDS

CUT-OVER TIMBER LANDS—Texas cut-over timber lands will yield largest profit on the investment. We have tracts from 500 to 50,000 acres that in a few years will be selling at many times the present prices. Singleton Bryan & Co., Beaumont, Texas.

WE HAVE 40,000 acres of cut-over timber lands in Autauga county, Ala., at a bargain, and a big bargain for a quick sale. These lands can be had for the next thirty days at an average price of \$7 per acre taken as a whole. They are fine farm lands, splendid for fruit or truck farms, and will average about one-half bale of cotton to the acre. Southern States Realty Co., Montgomery, Ala.

TIMBER FOR SALE

FOR SALE—Timber on about 4000 acres cut-over land near Scranton, Miss.; stumps for turpentine purposes, also down timber for cross-ties, fence post, etc.; fine charcoal proposition. Address Kracke & Flanders, New Orleans, La.

COLONIZATION LANDS

SOUTHWEST TEXAS LANDS for colonization and investment; in the heart of big developments in the artesian belt and Gulf coast. Tell us your wants. Engle Bros., 412 Gibbs Bldg., San Antonio, Texas.

FARM AND TIMBER LANDS

FOR SALE—Large and small plantations in the rich Red River Valley, cheap and on easy terms; also large tract of hardwood. Apply to E. J. Hes, Alexandria, Louisiana.

I HAVE BARGAINS IN TIMBER TRACTS, large colonization propositions, cut-over lands and reclamation tracts in any size wanted up to 150,000 acres from \$2.50 per acre up.

Wm. R. Taylor, Land and Timber Investments, 508 Perrin Building, New Orleans, La. Established 1898. Sales over \$6,000,000.

TRACT FOR COLONIZATION.—12,000 acres in Lavaca and Jackson counties, Texas; 96 per cent. tillable; black waxy and black sandy land. On both sides of Lavaca River. Numerous settlements and good wells of water on tract; all subdivided and ready for colonizing. Will give good terms on this tract. Emil Locke, No. 712-13 Gibbs Bldg., San Antonio, Tex.

HOME AND FARM DEVELOPMENT LANDS.—27,000 acres of land in North Carolina, well adapted to colonization purposes or to development as a farming proposition. Lies on both sides of the S. A. L. Ry. Contains large area of famous Hoffman sandy loam type of soil, which readily responds to intensive methods of cultivation and returns enormous yields of cotton, corn and truck. 98 per cent. can be brought into cultivation. Fine water and healthful climate. Address W. P. McRae, Rockingham, N. C., or P. C. Whitlock, Charlotte, N. C.

FARMS AND TRUCK LANDS

\$5000 WILL BUY 180 acres of land; 100 in cotton; fine irrigation proposition; good house; one mile from Sabinal, Uvalde county, Texas. Address P. O. Box 93, Sabinal, Texas.

MONEY can be made growing fruit and vegetables on the west coast of Florida. Almost any fruit or vegetable can be grown in time for earliest market so as to command the best price. We will gladly send booklet and answer questions. Tampa & Tarpon Springs Land Co., Tampa, Fla.

FLORIDA FARMS ARE FORTUNES.—Our soil similar to fertile sections Iowa, Missouri; easy-payment plan. Write for booklet. Milton Land & Investment Co., Marianna, Fla.

TEXAS LANDS.—Large tracts of the celebrated Gulf Coast fruit and truck land, where crops grow and flower and bloom every month in the year. James & Colby, Galveston, Texas.

FOR SALE—235 1/2 acres prairie land, located on Santa Fe Railroad and on public road (shelled) only 13 miles from Beaumont and one-quarter mile from Fannett; suitable for general farming or for subdividing into smaller tracts. Title perfect. Price \$27.50 per acre. Also other lands suitable for subdivision. Texas Realty Co., Beaumont, Texas.

IMPROVED STOCK, fruit, poultry, grass and grain farm, 300 acres, in healthy and productive Ozark foothills of Northern Arkansas; \$25 per acre; fine spring and cold clear running water. W. D. Taylor, 60 South Fort St., Memphis, Tenn.

FOR SALE—1405 acres in one body; 1000 acres cultivable; balance long-leaf pine and hickory; located on Chattahoochee River in Alabama; does not overflow; one and one-half mile river frontage, with boat landing; river navigable most all year; soil rich sandy loam; produces well without fertilization; 6 miles to Seaboard R. R.; good firm public road to station; 6-room dwelling; 8-horse barn; 15 2-room tenant-houses; water supply ample. Price only \$14 per acre. Tyler & Ramsay, 310 N. 21st St., Birmingham, Ala.

GREAT HOUSTON (Population over 100,000).—Just twelve miles out on Main street (Houston's \$200,000,000 thoroughfare) is located North Houston Gardens; 10-acre tracts only \$600; terms, \$25 cash, balance \$15 per month, no interest; five-acre tracts, \$400; terms \$15 cash, balance \$7.50 per month, no interest; 142-acre improved farm 50 miles from Houston, price \$25 per acre. H. S. Taylor, Scanlan Bldg., Houston, Texas, Member Houston Real Estate Exchange and the Texas Realty Association.

902-ACRE black prairie land farm, Grayson county, Texas; 3 miles railway town; every acre cultivated; 3 improvements; school on land; telephone; rural route; splendid community. Buy at \$60 now, sell for \$75 next year. Hann & Kendall, Dallas, Texas.

VIRGINIA AND MARYLAND high-class water-front property on the famous Eastern Shore of Maryland, also on the Chesapeake Bay in Virginia, and farms in all the Piedmont section; many bearing commercial apple orchards in the mountains of Virginia. Send for Catalogue S. Southern Farm Agency, 721 Main St., Lynchburg, Va.

YOU SHOULD JOIN US in owning a Texas Bermuda onion farm. We are developing 500 acres of the best onion land in Texas. 3 acres of our land made \$1800 profit. Co-operation with us means wealth. You cannot lose. All land irrigated from artesian wells. No water troubles. One hundred acres in each farm. 100 shares per farm. \$150 per share, monthly payments of \$5 per acre. Let us send you particulars. Zavala Onion Farms Company, Gibbs Building, San Antonio, Texas.

THE FRIO VALLEY WINTER GARDENS. La Salle county, Southwest Texas, a colony of 100,000 acres level rich black sandy loam in famous artesian belt; grow oranges, figs, Bermuda onions. We are opening Fowlerton, a new town on new railroad in heart of the colony. Guaranteed improvements on townsite. A 10-acre farm and free residence lot on terms of \$15 cash; balance \$10 monthly. Write for booklet A, prices, plats, etc. Fowler Brothers Land Co., Frost Building, San Antonio, Texas.

BARGAIN IN SOUTH GEORGIA FARM. Following described farm can be bought for \$35 per acre on reasonable terms: 5612-acre tract; 1500 acres in high state of cultivation; two new houses, one 8-room and one 7-room; 24 new 4-room houses; 30 2-room houses; barn 60x150 feet, with 150x110; grain crib 24x36; three large tool and implement sheds; 12 smaller barns; one new stonehouse 24x40; cotton gin, two 70-saws, with 30 H. P. engine and boiler; total of 75 buildings; artesian well and large tank with gasoline pumping plant; 15 miles wire fence; two pastures, 500 acres each; five-acre fishpond, well stocked; turpentine lease now producing \$1500 per month; 800 acres cotton; 100 acres oats this year; balance of cleared land in corn, sugarcane and potatoes; soil is exceptionally fertile. Trifolium loam; ideal for large stock farm, subdivision or rich man's farm; two miles from G. S. & F. and A. B. & A. railroads, with local road through place; two miles of the National Highway. McLendon Bros., 14 Auburn Ave., Atlanta, Ga.

FOR SALE—Irrigated celery farm with artesian flowing wells; has produced 1000 crates of celery to the acre; one-half mile of town and loading station; in the famous Sanford, Fla., celery section. A. W. Brown, Enterprise, Fla.

600 ACRES unincumbered, unimproved chocolate agricultural land near Canyon, Texas (celebrated Panhandle), \$40 per acre; might take half in other desirable property. J. E. Griffith (owner), 919 Cannon Ave., Ft. Worth, Texas.

REAL ESTATE FOR SALE—Improved farm lands in finest farm section of Florida; 40 to 400 acres in a body at \$10 per acre; paying investment; abstract of title furnished. Apply to S. S. Sanford, Jasper, Fla.

IRRIGATED LANDS.—Parties in the North, East and Middle West interested in improved and unimproved irrigated lands and ranch property in the great Pecos section, communicate with us. Pawkett & Davis, Pecos, Tex.

JAS. GOODE REAL ESTATE CO., ranch and irrigated lands. Office, Orient Hotel, Pecos, Tex.

FOR SALE—Three nice farms in Darlington County, S. C., of 250, 324 and 506 acres, 6, 5 and 4 miles, respectively, from town of Hartsville; good land; good buildings. Price \$90, \$80 and \$75 per acre. Each plantation on a public road. The 506-acre place has railroad through it and a sidetrack. The public roads are very good, which is an appealing feature. Locations healthy. Desirable sections. Apply to T. H. Coker, Jr., Hartsville, S. C.

WEST VIRGINIA ORCHARDS.—One hundred acres for an orchard to be found anywhere; altitude, exposure, air, drainage and soil all that can be desired; improved by two dwellings, stable, wagon shed, and all equipment, consisting of two mules, wagons, harrows, plows, etc.; ten acres planted; good road full length of orchard; six-mile down-hill haul to Keyser. Price \$6000 if sold quick. Address J. E. Lepe, Keyser, W. Va.

HOMESEEKERS.—Coleman County, Texas, offers the best inducements to the small farmer and stock raiser; the best land on earth; fine water and an ideal climate, together with cheap lands, both raw and improved. Coleman Commercial Club, Coleman, Texas.

SONORA (MEX.) LANDS.—170,000 acres, high percentage agricultural; surveyed; in actual judicial possession under perfect title by American owners, this city; delivery certain without delay; no trades; price \$1.25 per acre; 1/4 cash; balance one and two years at 6%; report; blueprints. Ask the C. E. Way Land Co., Sales Agents, Frost Bldg., San Antonio, Tex.

MR. INVESTOR, TAKE NOTICE! 13,000 acres of valley land; five miles frontage on bold, beautiful flowing river; all fine agricultural land; in strong flowing artesian belt, not far from railroad south of San Antonio. The finest big body of cheap land left in South Texas. As fine as silk. Price \$13 per acre; easy terms, with release clauses for subdividing. Wire or write us at once. Kullenberg Realty Company, 302 Gibbs Bldg., San Antonio, Texas.

LARGE stretches of land on Florida's west coast particularly suited to fruit and vegetable growing. Good markets nearby. This section has schools, churches and good roads, etc. Let us send booklet. Prices per acre low and terms liberal; favorable contract for purchasers. Tampa & Tarpon Springs Land Co., Tampa, Fla.

WHY PALMETTO LEADS.—The 800,000 boxes of fruits and early vegetables attests the superiority of soil, climate and irrigation necessary to produce such crops. The ease with which such crops are handled by rail and water make it an ideal place for fruit and vegetable growing. The Manatee River, Terra Cina and Tampa bays furnish ideal salt-water fishing, boating and bathing. For further information address The Manatee River Board of Trade, Palmetto, Florida.

BIGGEST BARGAIN IN LOUISIANA.—2300 acres, all cultivable; 1800 acres now in crops, 50 per cent. cane; splendid equipment of buildings for all purposes, cost \$40,000; over 30,000 live stock and implements.

Trunk line railroad through the property; express, telegraph, telephone and postoffice at one corner of it; fronts on Mississippi River, near New Orleans; will sell for \$100,000, or the rate of about \$12 per acre plus cost of improvements; 3900 acres adjoining this property has recently been sold out to Northern farmers at \$75 to \$90 an acre; this plantation is well ditched and drained and surveyed and can be sold out within six months' time at a profit of 50 per cent. to 100 per cent.

Terms: Half cash; balance one to five years' time at 6 per cent. Wm. R. Taylor, Land and Timber Investments, 508 Perrin Bldg., New Orleans, La. Established 1898. Sales over \$6,000,000.

PARTIES in the North, East and Middle West interested in Southeast Texas farm and truck lands and acreage property communicate with C. B. Shepard, Box 425, Beaumont, Tex.

FOR SALE OR EXCHANGE—A plantation in the famous delta of Mississippi, where the lands are as fertile as anywhere on the globe, containing 1111 acres, situated 1 1/2 miles directly south of an up-to-date town on the Y. & M. V. R. R.; just 48 miles south of Memphis; 800 acres clear; 200 acres of hill pasture land, about 100 acres of bottom pasture well set with lespediza and native grasses; the balance of this property except this 200 acres is in the delta; sandy loam and buckshot soil; improvements consist of nearly new 7-room 1 1/2-story residence, barn, stables, toolhouse, blacksmith shop, poultry house, etc.; 25 tenant-houses, with necessary outbuildings; one-stand steam gin, and all under wire fence, with driven wells. This property pays annually from \$5000 to \$10,000 net profit, based, of course, on the price of cotton and cottonseed, corn and hay and stock. This property has to be seen to be appreciated. J. B. Hamner, 80 Madison Ave., Memphis, Tenn.

ANOTHER PLANTATION FOR SALE OR EXCHANGE, containing 957 53-100 acres, with 404 62-100 in cultivation, of which about 250 acres are set in the finest meadow, consisting of lespediza and Bermuda grass, balance in cotton and corn. It only cut last season over 10,000 bales of hay, which sold at from \$10 to \$14 per ton. This property is well drained, and all can be cultivated when cleared. There is about 1,500,000 of hardwood timber on the woodland, with contracts for the use of sawmill and machinery for cutting right at this place and within a mile and a half of the timber, that goes with the deed. The improvements are nothing extra on this place. The price takes care of that, however, being offered at \$35,000. This property is located in the county of Washington, State of Mississippi, and is known as the banner cotton country of the world. Plats, terms and a more detailed description furnished on demand of proper parties. Address J. B. Hamner, 80 Madison Ave., Memphis, Tenn.

MACHINERY AND SUPPLIES

FOR SALE—Two Browning locomotive cranes, practically new; 46-foot radius; immediate delivery; specifications furnished. Universal Construction Co., 408 Navarre Bldg., St. Louis, Mo.

WE CAN SAVE YOU MONEY.—Plate glass, store fronts, metal trimmings, metal ceilings, everything complete for your stores. For particulars write Store Front Co., Box 306, Savannah, Ga.

WANTED—Every consumer in the Southwest to know that the Texas Rolling Mill Company of Fort Worth, Texas, manufactures track spikes, track bolts, machine bolts and nuts; also standard sizes of bar iron. One hundred tons always in stock. Prompt shipments our specialty. Satisfaction guaranteed.

RUBBER BELTING FOR SALE.—We offer 84 feet of 2 1/2" 6-ply, 98 feet of 1 1/2" 6-ply, 53 feet of 1 1/4" 6-ply, and 84 feet of 1 1/2" 6-ply. These are remnants of new belting offered at second-hand prices. Burr Oak Belting Co., Cincinnati, Ohio.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

GOVERNMENT PROPOSALS

U. S. ENGINEER OFFICE, Jacksonville, Fla., July 3, 1911. Sealed proposals for dredging at Trout Creek cut and constructing shore retirement, St. Johns River, Fla., will be received at this office until 12 M. August 3, 1911, and then publicly opened. Information on application. GEO. R. SPALDING, Capt., Engrs.

NEW BOND OFFERINGS

\$6000.00 6% School Bonds

Butler, Tenn., July 6, 1911. Wanted—Sealed bids on a six-thousand-dollar coupon bond issue for the purpose of purchasing a site and the erection thereon a school building and to furnish and equip the same. Bonds payable at the Johnson County Bank in said town April 15, 1931. Interest at 6 per cent. per annum, payable semi-annually. Bids to be delivered on or before August 15, 1911.

J. E. REECE, Mayor.
D. R. STOUT, Recorder.

\$40,000 5% Bonds

Greenville, S. C. Sealed bids will be received up to 12 o'clock M. August 1, 1911, by the Board of Trustees of School District No. 17 for City of Greenville, for the issue of \$40,000 5 per cent. 20-year Coupon Bonds, issued for the Building and Repairing School Buildings. Interest payable semi-annually on July and January, in Greenville or New York. These bonds are exempt from State, county and municipal taxation. Certified check for \$500 to accompany each bid. The Board of Trustees reserves the right to reject any or all bids.

T. Q. DONALDSON, Chairman;
P. T. HAYNE, Secretary.

\$300,000 Water-Works Bonds

CITY OF CHARLOTTE, N. C. Sealed bids will be received up to noon August 14, 1911, by the Mayor and Finance Committee of the City of Charlotte, N. C., for all or any part of \$300,000 4½ per cent. 30-year coupon bonds issued for the extension and improvement of the city water-works.

Interest payable semi-annually, January and July, in Charlotte or New York.
Certified check for \$1000, payable to the City of Charlotte, must accompany all bids. No bid for less than par will be considered. Right reserved to reject any and all bids.

E. W. THOMPSON,
Chairman Finance Committee,
Charlotte, N. C.

Municipal Improvements for the City of Muskogee, Oklahoma

IN ACCORDANCE WITH SPECIAL BOND ISSUE OF 1911.
CONTRACT L.
CONSTRUCTION OF AGENCY HILL RESERVOIR.

Sealed proposals will be received by the City Council of the City of Muskogee, Oklahoma, until 10 o'clock A. M. Tuesday, July 25, 1911, for the construction of Agency Hill Reservoir, and opened immediately thereafter.

The Agency Hill Reservoir is a reinforced concrete circular structure about 200 feet in diameter, with a maximum depth of 31 feet, and a storage capacity of 6,000,000 gallons.

Proposals for this contract shall be accompanied by a certified check for \$10,000 (ten thousand dollars) made payable to the City of Muskogee, Oklahoma, without condition.

Plans and specifications can be secured at the office of the City Engineer, Muskogee, Oklahoma, or at the office of Alexander Potter, Consulting Engineer, 114 Liberty street, New York City, by payment of \$2.50. File all bids with Chas. Wheeler, Jr., City Clerk.

The right is reserved to reject any and all bids.

By order of the City Council.
E. H. FLEMING,
Commissioner of Water, Lights and Sewers.
ALEXANDER POTTER,
Consulting Engineer.

T. P. CLONTS,
City Engineer.

\$180,000 4½% Bonds

Pensacola, Fla. Notice is hereby given by the County Commissioners of Escambia County, Florida, that they will receive bids for the purchase of \$180,000 4½ per cent. coupon bonds of Escambia County, Florida, at the office of the Clerk of the Circuit Court of Escambia County, Florida, on Tuesday, the 15th day of August, 1911, at 10 A. M. The amount of bonds hereby offered to be sold are \$180,000 of bonds to be issued by Escambia County, Florida, and bear interest at the rate of 4½ per cent. per annum. The said bonds are in denomination of \$500 each and numbered consecutively by commencing with number 1. The interest on said bonds is at the rate of 4½ per cent. per annum, payable October 1, annually. The said bonds provide that twelve of said bonds shall be retired on the 1st day of October of each year, commencing October 1, 1912, in the order in which they will be floating bonded indebtedness, \$38,000.

The County Commissioners hereby reserve the right to reject any and all bids offered upon the said bonds.

JAS. MACGIBBON,
Clerk Board County Commissioners.

Sewerage Bonds for the City of Mt. Pleasant, Texas

The City Council of this city will receive sealed bids for proposals until August 8 at 5 P. M. 1911, for \$16,000 5 per cent. thirty-year non-option bonds. Interest payable semi-annually. Bonds are payable at the office of the State Treasurer, at Austin, Texas, payable in lawful money of the United States, in denomination \$250 each, dated 15th day of June, 1911.

Total floating bonded indebtedness, \$38,000. No other debt.

Total actual values, \$1,700,000.

Total value last rendition from rolls 1911, \$1,200,000.

Values increased four times in six years; \$200,000 increase in values this year.

Bonds issued by the authority of City Council. Regular election carried five to one and approved by the State of Texas.

The right to reject any and all bids is hereby reserved, and a certified check of \$250 must accompany each bid, made payable to the City of Mt. Pleasant, Texas, in case of forfeit. For further information address J. V. Moore, Mayor, Mt. Pleasant, Texas.

Notice of Sale of School Bonds

INDEPENDENT DISTRICT OF WELLSBURG, IN THE COUNTY OF BROOKE, STATE OF WEST VIRGINIA.

Sealed bids will be received at the office of the Board of Education of the Independent District of Wellsburg, in the County of Brooke, in the State of West Virginia, until 12 o'clock noon Tuesday, August 15, 1911, for the purchase of school bonds of said Independent District in the sum of eighty-five thousand (\$85,000) dollars. Said bonds are school-improvement bonds, issued under the authority of the statutes of the State of West Virginia, and of an election held in said district on the 11th day of April, 1911.

Said bonds will be of the denomination of \$500 each, and numbered consecutively from one to one hundred and seventy, each inclusive, bearing date the 1st day of August, 1911, payable in not less than ten and not more than thirty-four years from date thereof, with interest at the rate of 5 per cent. per annum from date, payable annually on the 1st day of August of each year after the date thereof, principal and interest payable at the National City Bank of New York.

No bids will be received for less than par and accrued interest to date of delivery of bonds.

All bids must be accompanied by certified check, payable to the order of said Board, equal to 5 per cent. of the par value of the number of bonds bid for, and bids may be for any number of said bonds. The Board reserves the right to reject any and all bids. No conditional bids will be considered.

By order of the Board of Education of the Independent District of Wellsburg, in the County of Brooke, this 11th day of July, 1911.

ELMER HOUGH,
President.

Attest:
E. E. CARTER,
Secretary.

Notice of Sale of Bonds

Sealed proposals will be received by the Board of Bond Trustees of Jasper, Florida, until August 10, 1911, at twelve o'clock noon, for the purchase of all or any part of the \$30,000 five per cent. sewerage, street and city hall bonds of the City of Jasper; thirty bonds of \$1000 each, dated July 15, 1911, maturing thirty years, interest payable annually.

Any defect in ordinance calling election cured by special legislative act.

Each bid to be accompanied by certified check for one per cent. of the par value of bonds bid for.

Bids to be addressed to the undersigned. Right reserved to reject any or all bids.

W. S. MURROW,
Secy. Board of Bond Trustees.

Special Bond Issue of 1911 Municipal Improvements for Muskogee, Oklahoma.

COODY CREEK SANITARY OUTFALL SEWER.
CONTRACTS G AND H.

Sealed proposals will be received by the City Council of the City of Muskogee, Oklahoma, at the Council Chamber, until 10 o'clock A. M. July 25, 1911, for the construction of Sections 7 and 8 of the Coody Creek Sanitary Outfall Sewers, and opened immediately thereafter.

Section 7 embraces 3000 ft. of 39-inch sewer and 400 ft. of 30-inch sewer.

Section 8 embraces 3000 ft. of 27-inch sewer and 710 ft. of 18-inch sewer.

Alternate bids are asked for two-ring brick with vitrified brick invert, manufactured concrete pipe and manhole concrete pipe with vitrified brick invert, for the 39" and the 30" sewer, and for manufactured concrete pipe and vitrified pipe for the 27" and the 18" sewer.

Proposals for these contracts shall be accompanied by certified checks amounting to 10 per cent. of the amount of the work bid upon, made payable to the City of Muskogee, Oklahoma, without conditions.

Plans and specifications can be secured at the office of the City Engineer, Muskogee, Oklahoma, or at the office of Alexander Potter, 114 Liberty street, New York City, on or after July 5, 1911, by payment of \$3 for any or for all sections.

The right is reserved to reject any and all bids and to accept those that in the opinion of the City Council are to the best interest of the city. File all bids with Chas. Wheeler, Jr., City Clerk.

By order of the City Council.
E. H. FLEMING,
Commissioner of Water, Lights and Sewers.

ALEXANDER POTTER,
Consulting Engineer.

T. P. CLONTS,
City Engineer.

Bonds of Houston Ship Channel Navigation District of Harris County, Texas.

Sealed bids will be opened at the office of A. E. Amerman, County Judge of Harris County, Texas, Houston, Texas, at 10 A. M. August 1, 1911, for all or any part of the bonds of the above district, which includes the whole of Harris county.

Amount of bonds, \$1,250,000.

Rate of interest, four and one-half (4½) per cent., payable semi-annually at Houston, Texas, or at the National Bank of the Republic, Chicago, Ill., at the option of the holder.

Denomination, 1248 bonds \$1000 each, 4 bonds \$500 each.

Bonds payable in installments, one-fourth of the issue in ten years, one-fourth in twenty years, one-fourth in thirty years, and one-fourth in forty years, with no option to redeem.

Prospectus mailed upon request from the office of A. E. Amerman, County Judge. All rights reserved.

All bids must be accompanied by a certified check for 1 per cent. of the bid. Bids must be sealed and must be on file by 10 A. M. August 1, 1911, at the office of A. E. Amerman, County Judge, addressed to

C. G. PILLOT,
Chairman Navigation and Canal Commissioners.

Bond Sale

The Mayor and Board of Aldermen of the City of Lexington, Mississippi, will receive sealed bids for the purchase of forty-one thousand five hundred dollars Municipal Water-works Bonds and twenty-one thousand dollars Municipal Sewerage Bonds, said bonds bearing five per cent. interest. All bids will be opened on Tuesday, the first day of August, 1911, and all bids for each issue must be accompanied by certified check in the sum of three hundred dollars. Checks will be returned to unsuccessful bidders. Board reserves the right to reject any and all bids.

R. E. WILBURN,
City Clerk.

\$15,000 Railroad Construction Bonds

Bond issue of fifteen thousand dollars (\$15,000) of the Town of Hartsville, S. C., to bear interest not exceeding six per cent., payable annually, to be of the par value of one hundred dollars (\$100) each, maturing ten years after date, but redeemable in five years. The purpose of this issue of bonds is to aid in the building and construction of the South Carolina Western Railway. Sealed proposals will be received by the Town Council of the Town of Hartsville, S. C., until 12 o'clock M. July 31, 1911. No bids for less than par and accrued interest will be considered. Certified check for one thousand dollars (\$1000), payable to the order of the Town of Hartsville, to accompany all bids, and to be forfeited in case of failure of purchaser to comply with his bid. Right reserved to reject any or all bids. Address all bids to F. A. Miller, Mayor, Hartsville, S. C., and endorse plainly on the envelope "Bids for Bonds." For further information apply to F. A. Miller, Mayor.

\$400,000 5% Iredell County Road Improvement Bonds

OFFICIAL ADVERTISEMENT.

Statesville, N. C., July 8, 1911. Sealed bids will be received by the undersigned at the office of the Board of Commissioners of Iredell County, in the City of Statesville, N. C., until 9 A. M. Monday, August 7, 1911, for either series of the 5 per cent. Road Improvement Bonds, dated July 1, 1911, and due and payable in three series, as follows:

One hundred and twenty-five thousand (\$125,000) dollars due and payable July 1, 1925.

One hundred and twenty-five thousand (\$125,000) dollars due and payable July 1, 1931.

One hundred and fifty thousand (\$150,000) dollars due and payable July 1, 1931.

Bids will be received on either or all the three series, but should be made separate, as only one series will be sold at this time.

All three series are dated July 1, 1911, and in denominations of one thousand (\$1000) dollars, with interest payable semi-annually on January 1 and July 1 each year, both interest and principal payable in Statesville, N. C.

These bonds are issued by authority of an Act of the General Assembly of North Carolina, ratified March 3, 1911, and an election held under and by authority of said Act on May 9, 1911, which was duly carried.

There is no litigation pending or threatened affecting this issue. Assessor valuation of property in the county for taxes, 1910, was \$10,400,000, and there will be a substantial increase this year. Total bonded indebtedness, including this issue, \$420,000.

Tax rate for all purposes, 97½ on \$100 property. No floating indebtedness, and tax will not have to be increased to pay interest on this issue and create a sinking fund to pay off same at maturity, as the present road tax is sufficient. Population, census 1910, 35,314.

Certified check or bank draft for two per cent. of amount of bid should accompany all bids, same to be made payable to the treasurer of Iredell county, N. C. No bids will be considered for less than par and accrued interest.

The Commissioners reserve the right to reject any and all bids.

Full information will be furnished upon application.

N. B. MILLS,
Chairman Board of Commissioners
of Iredell County.

CLASSIFIED OPPORTUNITIES

CONTINUED FROM PAGE 83.

FINANCIAL

SAVANNAH, GA.—Real estate loans paying 6 per cent. to 7 per cent. to the investor; absolutely safe. Beautiful sites for winter homes at Vernon View, the salt-water place near Savannah on the Grand Prize Course; ideal winter climate. G. A. Mercer, Law and Real Estate, Savannah, Ga. References: Any bank or trust company in Savannah.

PROFESSIONAL

ARE YOU POSTED on twentieth-century patent searching? The engineer service separate from law practice? Read No. 2-B, Inventor's Pocket Library, free for stamp. Engineer Searching Co., Fleming Bldg., Washington, D. C.

PATENT ATTORNEYS

PATENTS OF QUALITY.—The valuable and saleable kind. Send for free advisory information. Reference to clients throughout the U. S. Geo. R. Hamlin, Patent Lawyer, Inventive Age Bldg., Washington, D. C.

EUGENE C. BROWN, ENGINEER and Patent Lawyer, Suite 40 Victor Bldg., Washington, D. C., Member Bar U. S. Supreme Court. Patents and Trademarks. Patent Suits for Infringement. Mr. Brown is especially qualified to prosecute cases in Patent Office and patent litigation from both Engineering and Legal standpoints, having been Examiner in U. S. Patent Office for nine years. Send sketch for advice.

IDEAS WANTED.—Manufacturers are writing for patents procured through me. Send for free 72-page guide and "Stepping Stones" (containing over 200 inventions wanted). Personal services. Clients' patents sold free. Trade-marks registered. R. B. Owen, Dept. 12, Washington, D. C.

PATENT WHAT YOU INVENT.—Your ideas may bring you a fortune. Our free books tell what to invent and how to obtain a patent. Send sketch of invention for free opinion as to patentability. Patents obtained free. H. Ellis Chandler & Co., successors to Woodward & Chandler, Suite 75 Borneo Bldg., Washington, D. C.

PATENT YOUR IDEAS.—\$100,000 offered for one invention, \$5000 for another; book, "How to Obtain a Patent" and "What to Invent," sent free; send rough sketch for report as to patentability; patent obtained or fee returned. We advertise your patent for sale at our expense. Chandler & Chandler, patent attorneys, 978 F street, Washington, D. C.

PATENTS Secured or Fee Returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,000,000 offered for one invention; \$16,000 for others. Patents secured by us advertised free in World's Progress; sample free. Victor J. Evans & Co., Washington, D. C.

PATENTS FOR SALE

FOR SALE—PATENT ON CAR COUPLER. Will release while under tension; do not have to catch slack; saves time, worry and men. Will sell whole or half interest. Address Otho Starling, Gradyville, Ga.

WE HAVE recently secured the following patents. Address all communications to Sales Dept., Victor J. Evans & Co., Washington, D. C.: Frank B. Heiser, lock for can closure; Jacob C. Hoover, vehicle spindle; John A. Campbell, miter box; James E. Bliss, rail tie; S. S. Eccleston, steam cooker; Willard A. Hancock, garden-seed planter; Philip Weber, egg rack; J. H. Tyler, window sash; H. W. Patten, barrel lifter; Ira P. Russell, baby seat; Lertin W. Ridenour, insulator line attaching device; T. J. Crowder, passenger recorder and station indicator; C. N. Newcomb, flying machine; Clarence Mallett, alarm for drip pan; Wm. R. Hunter, metal drip pan; Geo. F. Smith, paint compound; Ernesto Fuchs, watch charm; Frank G. Lockwood, file cabinet; W. G. Wheeler, shoe retainer; J. M. Lewis, vise; W. H. McKinney, device for repairing violin bows; S. R. More, automatic railway switch; John Ostertag, animal trap; Daniel Springer, glass cutter; Edward C. Little, lock.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

PUBLIC BUILDINGS

Sealed Proposals for Reinforced Concrete Frame Work Required in the Courthouse for Fulton County

To be erected on the Southeast Corner of South Pryor and East Hunter Streets in the City of Atlanta, Georgia, for Fulton County, Georgia.

1. Sealed proposals addressed to the Commissioners of Roads and Revenues of Fulton County, Georgia, will be received until twelve o'clock noon August 10, 1911, for the furnishing of all material and labor required for the reinforced concrete frame work, consisting of columns, girders, beams, floor slabs and pile caps for a building covering an area of approximately 130 feet by 220 feet, consisting of sub-basement, basement and nine stories, all as more minutely described in the plans and specifications for a Courthouse for Fulton County, Georgia, to be erected on the southeast corner of South Pryor and East Hunter streets in the City of Atlanta, Georgia, for Fulton County, Georgia, on file and open for inspection at the office of the Commissioners of Roads and Revenues and at the offices of the Associate Architects, A. Ten Eyck Brown and Morgan & Dillon, 607-10 Forsyth Building, Atlanta, Georgia. All bids to be endorsed "Proposals for Reinforced Concrete Frame Work for Fulton County Courthouse."

2. Copies of drawings and specifications may be obtained from the above Architects at 607-10 Forsyth Building, Atlanta, Ga., upon a deposit of a certified check for \$20 for each set. Said check to be returned to the maker upon the return of drawings and specifications in good condition.

3. All bids must be submitted on special proposal blanks furnished by above Architects or they will not be considered. Each proposal must be accompanied by a certified check of two per cent. of the total amount of bid, payable to the Commissioners of Roads and Revenues of Fulton County, Georgia, as a guarantee that the successful bidder will enter into a contract according to said plans and specifications and execute a bond for double the amount of contract within ten days after the notification of acceptance of his bid, failing which said certified check shall become forfeited to the Commissioners of Roads and Revenues as liquidated damages.

4. On signing of contract and approval of bond the certified checks of the unsuccessful bidders will be returned to their respective makers, and, further, if contract is not awarded or bond approved within two weeks from above date of opening proposals, the obligation of the bidders will cease and their checks will be returned.

5. Bidders will furnish sufficient evidence of their ability and experience in this class of work and must possess proper resources to carry out work satisfactorily to the Architects and the Commissioners of Roads and Revenues.

6. This work for which above proposals are requested must commence on the site not later than November 1, 1911, and be completed not later than April 15, 1912.

7. Payments upon the work will be made on the certificate of the Architect on the first day of each and every month during the time of this contract of 85% of the value of the work furnished and erected, provided the contractor has made application over his signature for said certificate on or before the 27th day of the preceding month and that a schedule of material and labor in place has been furnished with the estimate.

8. Each proposal shall be signed with the full name of the bidder, and if a company or corporation, by the full name of each partner or officer. All amounts shall be written in ink and expressed in words as well as figures.

9. The Commissioners of Roads and Revenues of Fulton County, Georgia, reserve the right to reject any or all proposals.

10. By order of the Commissioners of Roads and Revenues of Fulton County, Georgia.

(Signed) H. E. W. PALMER,
Chairman,
Commissioners of Roads and Revenues,
Fulton County, Georgia.

Sealed Proposals for Piling Required in the Courthouse for Fulton County

To be erected on the Southeast Corner of South Pryor and East Hunter Streets in the City of Atlanta, Georgia, for Fulton County, Georgia.

1. Sealed proposals addressed to the Commissioners of Roads and Revenues of Fulton County, Georgia, will be received until twelve o'clock noon August 10, 1911, for the furnishing of all material and labor required for the concrete piling in the various acceptable methods to receive the piling caps, columns, etc., for a building covering an area of approximately 130'x220', consisting of sub-basement, basement and nine stories, all as more minutely described in the plans and specifications for a Courthouse for Fulton County, Georgia, to be erected on the south-

east corner of South Pryor and East Hunter streets in the City of Atlanta, Georgia, for Fulton County, Georgia, on file and open for inspection at the office of the Commissioners of Roads and Revenues and at the offices of the Associate Architects, A. Ten Eyck Brown and Morgan & Dillon, 607-10 Forsyth Building, Atlanta, Ga. All bids endorsed "Proposals for Concrete Piling for Fulton County Courthouse."

2. Copies of drawings and specifications may be obtained from the above Architects at 607-10 Forsyth Building, Atlanta, Ga., upon a deposit of a certified check for \$20 for each set. Said check to be returned to the maker upon the return of drawings and specifications in good condition.

3. All bids must be submitted on special proposal blanks furnished by above Architects or they will not be considered. Each proposal must be accompanied by a certified check of two per cent. of the total amount of bid, payable to the Commissioners of Roads and Revenues of Fulton County, Georgia, as a guarantee that the successful bidder will enter into a contract according to said plans and specifications and execute a bond for double the amount of contract within ten days after the notification of acceptance of his bid, failing which said certified check shall become forfeited to the Commissioners of Roads and Revenues as liquidated damages.

4. On signing of contract and approval of bond the certified checks of the unsuccessful bidders will be returned to their respective makers, and, further, if contract is not awarded or bond approved within two weeks from above date of opening proposals, the obligation of the bidders will cease and their checks will be returned.

5. Bidders will furnish sufficient evidence of their ability and experience in this class of work and must possess proper resources to carry out work satisfactorily to the Architects and the Commissioners of Roads and Revenues.

6. This work for which above proposals are requested must commence on the site not later than September 1, 1911, and be completed not later than November 15, 1911.

7. Payments upon the work will be made on the certificate of the Architects on the first day of each and every month during the time of this contract of 85% of the value of the work furnished and erected, provided the contractor has made application over his signature for said certificate on or before the 27th day of the preceding month and that a schedule of material and labor in place has been furnished with the estimate.

8. Each proposal shall be signed with the full name of the bidder, and if a company or corporation, by the full name of each partner or officer. All amounts shall be written in ink and expressed in words as well as figures.

9. The Commissioners of Roads and Revenues of Fulton County, Georgia, reserve the right to reject any or all proposals.

10. By order of the Commissioners of Roads and Revenues of Fulton County, Georgia.

(Signed) H. E. W. PALMER,
Chairman,
Commissioners of Roads and Revenues,
Fulton County, Georgia.

Sealed Proposals for Tile Fire-Proofing Required in the Courthouse for Fulton County

To be erected on the Southeast Corner of South Pryor and East Hunter Streets in the City of Atlanta, Georgia, for Fulton County, Georgia.

1. Sealed proposals addressed to the Commissioners of Roads and Revenues of Fulton County, Georgia, will be received until twelve o'clock noon August 10, 1911, for the furnishing of all material and labor required for the tile fireproofing of all interior structural-steel columns, beams, floor arches for a building covering an area approximately 130'x220', consisting of sub-basement, basement and nine stories, all as more minutely described in the plans and specifications for a Courthouse for Fulton County, Georgia, to be erected in the southeast corner of South Pryor and East Hunter streets in the City of Atlanta, Georgia, for Fulton County, Georgia, on file and open for inspection at the office of the Commissioner of Roads and Revenues and at the offices of the Associate Architects, A. Ten Eyck Brown and Morgan & Dillon, 607-10 Forsyth Building, Atlanta, Ga. All bids endorsed "Proposals for Tile Fireproofing for Fulton County Courthouse."

2. Copies of drawings and specifications may be obtained from the above Architects at 607-10 Forsyth Building, Atlanta, Ga., upon a deposit of a certified check for \$20 for each set. Said check to be returned to the maker upon the return of drawings and specifications in good condition.

3. All bids must be submitted on special proposal blanks furnished by above Architects or they will not be considered. Each proposal must be accompanied by a certified check of two per cent. of the total amount of bid, payable to the Commissioners of Roads and Revenues of Fulton County, Georgia, as a guarantee that the successful bidder will enter into a contract according to said plans and specifications and execute a bond for double the amount of contract within ten days after the notification of acceptance of his bid, failing which said cer-

tified check shall become forfeited to the Commissioners of Roads and Revenues as liquidated damages.

4. On signing of contract and approval of bond the certified checks of the unsuccessful bidders will be returned to their respective makers, and, further, if contract is not awarded or bond approved within two weeks from above date of opening proposals, the obligation of the bidders will cease and their checks will be returned.

5. Bidders will furnish sufficient evidence of their ability and experience in this class of work and must possess proper resources to carry out work satisfactorily to the Architects and the Commissioners of Roads and Revenues.

6. This work for which above proposals are requested must commence as to the manufacture of material not later than September 1, 1911, and be completed in the building not later than April 15, 1912.

7. Payments upon the work will be made upon the certificate of the Architect on the first day of each and every month during the time of this contract of 85% of the value of the work furnished and erected, provided the contractor has made application over his signature for said certificate on or before the 27th day of the preceding month and that a schedule of material and labor in place has been furnished with the estimate.

8. Each proposal shall be signed with the full name of the bidder, and if a company or corporation, by the full name of each partner or officer. All amounts shall be written in ink and expressed in words as well as figures.

9. The Commissioners of Roads and Revenues of Fulton County, Georgia, reserve the right to reject any or all proposals.

10. By order of the Commissioners of Roads and Revenues of Fulton County, Georgia.

(Signed) H. E. W. PALMER,
Chairman,
Committee of Roads and Revenues,
H. M. WOOD,
Clerk.

Sealed Proposals for Structural Steel Work Required in the Courthouse for Fulton County

To be erected on the Southeast Corner of South Pryor and East Hunter Streets in the City of Atlanta, Georgia, for Fulton County, Georgia.

1. Sealed proposals addressed to the Commissioners of Roads and Revenues of Fulton County, Georgia, will be received until twelve o'clock noon August 10, 1911, for the furnishing of all material and labor required for the structural steel work, consisting of columns, girders, beams, bases, etc., for a building covering an area of approximately 130'x220', consisting of sub-basement, basement and nine stories, all more minutely described in the plans and specifications for a Courthouse for Fulton County, Georgia, to be erected on the southeast corner of South Pryor and East Hunter streets in the City of Atlanta, Georgia, for Fulton County, Georgia, on file and open for inspection at the office of the Commissioners of Roads and Revenues and at the offices of the Associate Architects, A. Ten Eyck Brown and Morgan & Dillon, 607-10 Forsyth Building, Atlanta, Ga. All bids to be endorsed "Proposals for Structural Steel Work for Fulton County Courthouse."

2. Copies of drawings and specifications may be obtained from the above Architects at 607-10 Forsyth Building, Atlanta, Ga., upon a deposit of a certified check for \$20 for each set. Said check to be returned to the maker upon the return of drawings and specifications in good condition.

3. All bids must be submitted on special proposal blanks furnished by above Architects or they will not be considered. Each proposal must be accompanied by a certified check of two per cent. of the total amount of bid, payable to the Commissioners of Roads and Revenues of Fulton County, Georgia, as a guarantee that the successful bidder will enter into a contract according to said plans and specifications and execute a bond for double the amount of contract within ten days after the notification of acceptance of his bid, failing which said certified check shall become forfeited to the Commissioners of Roads and Revenues as liquidated damages.

4. On signing of contract and approval of bond the certified checks of the unsuccessful bidders will be returned to their respective makers, and, further, if contract is not awarded or bond approved within two weeks from above date of opening proposals, the obligation of the bidders will cease and their checks will be returned.

5. Bidders will furnish sufficient evidence of their ability and experience in this class of work and must possess proper resources to carry out work satisfactorily to the Architects and the Commissioners of Roads and Revenues.

6. This work for which above proposals are requested must commence in the drafting department of the manufacturer not later than September 1, 1911, and the entire work must be completed not later than March 15, 1912.

7. Payments upon the work will be made upon the certificate of the Architect on the first day of each and every month during the time of this contract of 85% of the value of the work furnished and erected, provided the contractor has made application over

his signature for said certificate on or before the 27th day of the preceding month and that a schedule of material and labor in place has been furnished with the estimate. A certificate will be given by the Architects for the balance or 15% upon completion of the contract in conformity with the plans and specifications, application having been made as above.

8. Each proposal shall be signed with the full name of the bidder, and if a company or corporation, by the full name of each partner or officer. All amounts shall be written in ink and expressed in words as well as figures.

9. The Commissioners of Roads and Revenues of Fulton County, Georgia, reserve the right to reject any or all proposals.

10. By order of the Commissioners of Roads and Revenues of Fulton County, Georgia.

(Signed) H. E. W. PALMER,
Chairman,
Commissioners of Roads and Revenues,
Fulton County, Georgia.
H. M. WOOD,
Clerk.

Sealed Proposals for Water-Proofing Required in the Courthouse for Fulton County

To be erected on the Southeast Corner of South Pryor and East Hunter Streets in the City of Atlanta, Georgia, for Fulton County, Georgia.

1. Sealed proposals addressed to the Commissioners of Roads and Revenues of Fulton County, Georgia, will be received until twelve o'clock noon August 10, 1911, for the furnishing of all material and labor required for the waterproofing in the basement and sub-basement of floors, walls, etc., for building covering an area of approximately 130'x220', consisting of sub-basement, basement and nine stories, all as more minutely described in the plans and specifications for a Courthouse for Fulton County, Georgia, to be erected on the southeast corner of South Pryor and East Hunter streets in the City of Atlanta, Georgia, for Fulton County, Georgia, on file and open for inspection at the office of the Commissioners of Roads and Revenues and at the offices of the Associate Architects, A. Ten Eyck Brown and Morgan & Dillon, 607-10 Forsyth Building, Atlanta, Ga. All bids to be endorsed "Proposals for Waterproofing for Fulton County Courthouse."

2. Copies of drawings and specifications may be obtained from the above Architects at 607-10 Forsyth Building, Atlanta, Ga., upon a deposit of a certified check for \$20 for each set. Said check to be returned to the maker upon the return of drawings and specifications in good condition.

3. All bids must be submitted on special proposal blanks furnished by above Architects or they will not be considered. Each proposal must be accompanied by a certified check of two per cent. of the total amount of bid, payable to the Commissioners of Roads and Revenues of Fulton County, Georgia, as a guarantee that the successful bidder will enter into a contract according to said plans and specifications and execute a bond for double the amount of contract within ten days after the notification of acceptance of his bid, failing which said certified check shall become forfeited to the Commissioners of Roads and Revenues as liquidated damages.

4. On signing of contract and approval of bond the certified checks of the unsuccessful bidders will be returned to their respective makers, and, further, if contract is not awarded or bond approved within two weeks from above date of opening proposals, the obligation of the bidders will cease and their checks will be returned.

5. Bidders will furnish sufficient evidence of their ability and experience in this class of work and must possess proper resources to carry out work satisfactorily to the Architects and the Commissioners of Roads and Revenues.

6. This work for which above proposals are requested must commence on the site not later than March 15, 1912, and be completed not later than May 15, 1912.

7. Payments upon the work will be made upon the certificate of the Architect on the first day of each and every month during the time of this contract of 85% of the value of the work furnished and erected, provided the contractor has made application over his signature for said certificate on or before the 27th day of the preceding month and that a schedule of material and labor in place has been furnished with the estimate.

8. Each proposal shall be signed with the full name of the bidder, and if a company or corporation, by the full name of each partner or officer. All amounts shall be written in ink and expressed in words as well as figures.

9. The Commissioners of Roads and Revenues of Fulton County, Georgia, reserve the right to reject any or all proposals.

10. By order of the Commissioners of Roads and Revenues of Fulton County, Georgia.

(Signed) H. E. W. PALMER,
Chairman,
Commissioners of Roads and Revenues,
Fulton County, Georgia.

H. M. WOOD,
Clerk.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

PUBLIC BUILDINGS

Proposals for Remodeling and Enlargement for County Courthouse, Laurens County, Laurens, South Carolina

Sealed proposals, addressed to the County Commissioners of Laurens County, South Carolina, at Laurens, S. C., will be received until twelve o'clock noon August 1, 1911, for the furnishing of all materials and the performance of all labor required for the remodeling and enlargement for the County Courthouse for the County of Laurens, State of South Carolina. All bids to be endorsed "Proposals for Remodeling and Enlarging County Courthouse." Said proposals to be opened upon the above date and time in public by the Commissioners. All work and materials must conform to plans and specifications thereon on file at the office of the said Commissioners at Laurens, S. C., and of the Associate Architects, A. Ten Eyck Brown and Proffitt & Hampton, at their offices in Atlanta, Ga.

Copies of drawings and specifications may be obtained from the above architects at Atlanta upon making a deposit for each set of a certified check for \$20, to be returned to the maker upon receipt of said drawings and specifications in good condition.

All bids shall be submitted on special proposal blanks furnished by said Architects, or they will not be considered, and each proposal must be accompanied by a certified check of two per cent. of the amount of the lump bid as a guarantee that the successful bidder will enter into a contract according to said plans and specifications. Said check to be made payable to the County Commissioners of Laurens County, South Carolina. If for any reason the bidder fails to execute the proper contract and bond as required within ten days after notification of the acceptance of his bid, then said certified check will become forfeited to the County Commissioners of Laurens County, South Carolina.

The County Commissioners of Laurens County, South Carolina, reserve the right to reject any or all proposals.

By order of the County Commissioners of Laurens County, South Carolina, June 21, 1911.

(Signed) H. B. HUMBERT,

Supervisor, Laurens County, South Carolina.

WATER-WORKS, SEWERS, ETC.

Sewers and Waterworks

Sealed proposals will be received by the Mayor and Council of Thomaston, Georgia, until 2 P. M. Tuesday, August 1, for furnishing material, machinery and labor for constructing water-works and sewer system in and for the town of Thomaston, Ga. Plans may be seen at the office of the City Clerk or Engineers, and specifications may be obtained from either.

Certified check for 5 per cent. required. The right is reserved to reject any or all bids.

CLAUDE WORRILL, Mayor.
H. E. RUSHEN, Clerk.
THE J. B. MCGRARY CO., Engineers,
1311-15 Empire Building,
Atlanta, Georgia.

Water-Works and Electric-Light Plant

CHANGE OF DATE.

Sealed proposals will be received by the Board of Mayor and Aldermen of the City of McKenzie, Tenn., at the Mayor's office until 2 P. M. August 3, 1911, when they will be publicly opened, for the construction of a water-works and electric-light plant. For all necessary information address F. D. Walpole, Recorder, McKenzie, Tenn. (C. H. Jenks, Engineer, Union City, Tenn.)

Sewer Contract

Bids will be received by the Town Council of the Town of Norton, Wise County, Virginia, at the Mayor's office, up to 4 o'clock P. M. Monday, July 24, 1911, for the construction of a complete sewer system in said town. Plans and specifications may be seen at the Mayor's office in Norton. Provisions for penalties, bond, etc., fully set out in specifications. The right is reserved to reject any or all bids. For further information apply to John Roberts, Mayor.

Sewers

Sealed proposals will be received by the Sewage Commission of Clinton, S. C., on August 21, 1911, publicly opened and read at 3 P. M., for the construction of a system of sanitary pipe sewers.

Work embraces approximately nine (9) miles of sewers 8 to 12 inches, and two settling tanks.

Plans and specifications may be obtained from Engineers on deposit of \$10.

Certified check for 5 per cent.

Right is reserved to reject any or all bids.

W. M. McMILLAN, Chairman.

S. W. SUMEREL, Clerk.

THE J. B. MCGRARY CO., Engineers,

1311-15 Empire Building,

Atlanta, Ga.

Trunk Sewers

Nashville, Tenn.
The Board of Public Works of Nashville, Tenn., will receive and open sealed bids at its office, City Hall, on Thursday, August 10, 1911, at 3 P. M., for building about seven miles of circular brick trunk sewers, ranging in sizes from thirty (30") inches to one hundred and eleven (111") inches in diameter. Certified checks on reputable banks, payable to the order of said board, required to accompany all bids as earnest money, as stipulated in the specifications. Satisfactory bond for faithful performance of contract, as stipulated by law, required and twenty (20%) per centum retained upon partial estimates until the completion of the work. Bids will be received separately for the several sewers and as a whole for the entire work. Said Board reserves the right to reject any or all bids. Plans and profiles can be seen at the office of the City Engineer, City Hall, Nashville, Tenn., and specifications and proposal blanks can be had upon application at said office either by mail or in person from and after July 1.

Bids must be made upon said proposal blanks and sealed and addressed to the Board of Public Works, Nashville, Tenn., and plainly marked "Bid for Trunk Sewer." This work includes about eighty-one thousand (81,000) cubic yards of both earth and rock excavation and about thirteen million (13,000,000) brick.

By order of the Board of Public Works.

WM. W. SOUTHWATE, City Engineer.

BRIDGES

Notice to Bridge Builders

Sealed bids will be received by the Board of Public Works of the City of Tampa, Florida, at their office, Room 28 First National Bank Building, up to 2 o'clock P. M. Wednesday, September 6, 1911, for the construction of a reinforced concrete or concrete-steel bridge, with bascule lift, over the Hillsborough River at Lafayette street. A certified check of \$10,000 must accompany each bid as a guarantee that the successful bidder will enter into contract according to their bid and specifications within ten days after award of same.

Plans and specifications to accompany each bidder's proposal.

A profile of the river at the bridge site and information can be obtained from the engineer of the Board.

The city reserves the right to reject any or all bids.

D. B. McKAY, Chairman.

Attest: ALLEN THOMAS, Clerk.

Bids Wanted for Bridge Foundation

Sealed bids are hereby invited for the building of a substructure for a steel traffic bridge over Red River at Shreveport, La., as per plans and specifications on file in the City Engineer's office at Shreveport, and at the office of Hedrick & Cochrane, 1118 McGee street, Kansas City, Mo.

Each bid must be accompanied by a certified check for three thousand (\$3000) dollars as an evidence of good faith that the successful bidder will enter into contract.

Each check to be made payable to the undersigned.

An indemnity bond of fifty thousand (\$50,000) dollars will be required of the successful bidder.

Approximate cost of the work, eighty-five thousand (\$85,000) dollars. The Bridge Committee of Bossier Parish and the City of Shreveport, La., reserve the right to reject any and all bids.

All bids must be in the hands of the undersigned by 10 A. M. Tuesday, August 1, 1911.

L. H. BAKER,

Secretary-Treasurer.

Shreveport, La., July 11, 1911.

Steel Highway Bridge

Sparta, Ga., July 14, 1911.
Proposals are called for by the Commissioners of Roads and Revenues of Hancock County, Georgia, for a steel highway bridge 110 feet long, 16 feet wide in the clear, to be erected over Little Buffalo Creek in said county. The county will build the masonry piers 110 feet in the clear, and will haul the bridge material to the site.

Bids are to cover materials and erection of steel portions, omitting wooden floor, and each bid must be accompanied by drawings and specifications showing the type of bridge, the sizes of members therein, total weight, the guarantee of safe strength under 100 pounds per square foot distributed load and under 15,000 pounds concentrated wagon load. The drawings and specifications are to be submitted for the approval of C. M. Strahan, Professor Civil Engineering, University of Georgia, Athens, Ga.

Bids are to be opened at the Commissioners' office in Sparta, Ga., on 3d day of August, 1911. Right reserved to reject any or all bids.

By order of the Commissioners.

W. E. WILEY, Clerk.

Concrete Bridges

Grenada, Miss., July 12, 1911.
Sealed proposals will be received by the Board of Supervisors of Grenada County at Grenada, Miss., until 12 o'clock noon August 7, 1911, for the furnishing of material and constructing of six reinforced concrete bridges in accordance with the plans and specifications on file in the office of the Chancery Clerk.

All bids must be accompanied by a certified check upon a solvent bank for 5 per cent. of the total amount of the proposal, and the successful bidder will be required to give bond in double of the amount of contract in accordance with the law.

The Board reserves the right to reject any and all bids or to accept the one deemed most advantageous to the county.

JOHN S. KING,

Chancery Clerk.

ALBERT T. WITBECK,

County Engineer.

Highway Bridge

Sealed proposals, together with competitive plans and specifications, will be received at the Courthouse, Benton, Tennessee, until 12 o'clock noon August 5, 1911, for the construction of a highway bridge across the Hiwassee River at Reliance, Tennessee.

Bids are to include the furnishing, delivering and erecting, complete, of a steel superstructure, concrete piers and abutments and earthen embankments.

Width of roadway to be eighteen (18) feet, and steel to be designed according to Cooper's specifications for Class D Highway Bridge.

Bidders are required to visit the site and secure such profiles or surveys as they may need. Further information may be obtained from J. N. McBrayer, Reliance, Tennessee.

A bond in the sum of \$20,000 will be required for the faithful performance of the contract.

The right is reserved to reject any and all bids or to accept any bid.

J. N. McBRAYER, Chairman;

CHAS. E. JOHNSON, Secy.,

Committee.

PAVING

Road Work

NOTICE TO CONTRACTORS.

Sealed bids will be received at the office of the Robertson County Pike Commission in Springfield, Tenn., up to 12 o'clock noon on Monday, July 24, 1911, for grading, ditching and macadamizing about fifty miles of public road in Robertson county, Tennessee. Plans and specifications may be seen at the office of the Pike Commission at any time after July 10, 1911.

JOSEPH E. WASHINGTON, Chairman.

ED S. ECKLES, Secretary.

Bids Wanted for Paving

Sealed bids are hereby invited for approximately square yards as follows:

20,000 square yards of brick.

50,000 square yards of wood block.

53,000 square yards of sheet asphalt.

60,000 square yards of asphaltic concrete.

49,000 square yards of bitulithic.

10,000 square yards of concrete.

As per schedule of streets and specifications in the office of the City Engineer. All bids to be in the hands of Secretary-Treasurer Thursday, July 27, 1911, at 10 o'clock A. M. The Council reserves the right to reject any and all bids.

L. H. BAKER,

Secy.-Treas.

Shreveport, La.

Paving

Brownsville, Texas, July 12, 1911.

Notice is hereby given that the City Council of Brownsville, Texas, will receive sealed bids until 12 o'clock noon August 15, 1911, for furnishing necessary labor and material for the construction of about 27,500 square yards of street paving. Bids to be made on three classes of pavement, namely, Brick, Cressed Wood Block and Bitulithic.

Each bid must contain full name of every person or company interested in same and be accompanied with a certified check for the sum of one thousand dollars as a guarantee if the bid is accepted a contract will be entered into and its performance promptly secured. Should any bid be rejected the certified check will be forthwith returned to the bidder. And should any bid be accepted certified check will be returned upon the proper execution and securing of the contract. Plans and specifications are on file with the City Clerk, also with the City Engineer of the City of Brownsville. Copies of the above will be forwarded upon receipt of five dollars. The right is reserved to reject any and all bids.

By order of the City Council City of Brownsville.

BENJ. KOWALSKI, Mayor.

L. B. PUENTE, City Clerk.

Building County Roads

Sealed bids will be received by the undersigned up to 12 o'clock August 7, 1911, for grading, graveling, construction of culverts and bridges on approximately twenty-eight miles of public roads. Plans and specifications may be seen at the office of F. T. Myers, Engineer, Brookhaven, Miss. Bids must be accompanied by certified check for \$1000, payable to Highway Commissioners, District No. 1, Lincoln County, Mississippi. The successful bidder will be required to give surety bond in accordance with the laws of this State. Gravel to be obtained from local pits. Roads to be surfaced 14 and 8 feet. Approximately 110,000 cubic yards grading; 168,500 square yards gravel surface; 800 yards concrete and 1600 linear feet vitrified pipe. Right to reject any and all bids reserved.

H. CASSEDY, Chairman,

Highway Commissioners,

District No. 1, Lincoln County,

Brookhaven, Miss.

Proposals for Street Paving

KEY WEST, FLORIDA.

Proposals will be received by the undersigned until 7:30 o'clock P. M. Wednesday, July 26, 1911, for the grading, curbing and paving of certain streets with either wood blocks, vitrified brick, bitulithic, asphalt blocks or asphalt macadam surfacing material. The work will embrace approximately the preparation of suitable foundations, furnishing and setting 18,395 linear feet of stone curb, and the surfacing 67,857 square yards of pavement, and furnishing the necessary castings for drainage.

Specifications may be procured and plans and profiles seen at the office of the clerk to the Board of Public Works, Key West, Florida, and general information from the undersigned.

Proposals will be opened publicly with the usual rights reserved.

BOARD OF PUBLIC WORKS,

OF KEY WEST, FLA.,

Wm. R. Porter, Chairman,

Key West, Fla.

JAMES NISBET HAZLEHURST,

Consulting Municipal Engineer,

Candler Bldg., Atlanta, Ga.

Office of the State Highway Commission

Richmond, Va., June 30, 1911.

Bids will be received by the undersigned and the Board of Supervisors of Lee County at the Clerk's office at Jonesville, Va., up to 11 A. M. Wednesday, August 9, 1911, for the improvement of about 180 miles of county highway.

Separate bids are asked on the following sections in accordance with the printed notice to contractors, as follows:

ROSE HILL DISTRICT.

Grade, Drain and Macadamize.

Section 1. Mile 1 to Mile 10, inclusive.

Section 2. Mile 11 to Mile 21, inclusive.

Grade and Drain.

Section 3. 12.62 miles.

Section 4. 7.69 miles.

Section 5. 8.59 miles.

Section 6. 8.76 miles.

JONESVILLE DISTRICT.

Grade, Drain and Macadamize.

Section 1. 11.30 miles.

Section 2. 13.07 miles.

Grade and Drain.

Section 3. 9.30 miles.

Section 4. 14.32 miles.

Section 5. 7.64 miles.

YOKUM STATION DISTRICT.

Grade, Drain and Macadamize.

Section 1. 12.10 miles.

Section 2. 4.14 miles.

Grade and Drain.

Section 3. 7.75 miles.

Section 4. 7.80 miles.

Section 5. 11.00 miles.

ROCKY STATION DISTRICT.

Grade, Drain and Macadamize.

Section 1. 8.25 miles.

Section 2. 11.50 miles.

Grade and Drain.

Section 3. 2.60 miles.

Section 4. 12.50 miles.

Plans and specifications may be seen at the office of the State Highway Commission, Richmond, Va., and at the office of the County Engineer, Pennington Gap, Va., and at the Clerk's office, Jonesville, Va., or a complete set of maps, plans and specifications may be had on application to the County Engineer, Pennington Gap, Va., for the sum of \$1.50 per section.

Bids for each separate section (for grading, draining and macadamizing) must be accompanied by a certified check for \$500, but a certified check in the sum of \$1500 will entitle the bidder to bid on three or more sections. Bids for each separate section of the grading and drainage must be accompanied by a certified check for \$300, but a certified check in the sum of \$500 will entitle the bidder to bid on three or more sections of grading; these checks as a guarantee of the acceptance and performance of the contract by the party to whom it may be awarded, and his failure to execute said contract will forfeit said check.

The right is reserved to reject any or all bids.

The successful bidder will be required to give bond in the amount of thirty-three and one-third (33 1/3) per cent. of face of contract.

P. ST. J. WILSON,

State Highway Commissioner.

PROPOSALS

PUBLIC BUILDINGS.

CONSTRUCTION BONDS

MISCELLANEOUS.

MISCELLANEOUS

THE CITY OF FORT WORTH, TEXAS.
I will receive sealed bids until September 5, 1911, for construction of a dam containing about 300,000 cubic yards of earth work and 80,000 cubic yards of masonry. Also concrete pipe line about 6 1/2 miles long. Details on application to THE BOARD OF ENGINEERS, City Hall, Fort Worth, Texas.

Laying Cast Iron Water Pipe

Sealed proposals will be received by the Commissioners of Public Works of the City of Alken, S. C., until 4 o'clock P. M. on July 31st, and then opened, for the laying of about 6 1/2 miles of 14-inch cast-iron water-pipe, and the supplying of sundry materials connected therewith.

No proposal will be considered unless accompanied by certified check for \$250, made payable to J. P. McNair, chairman, conditioned on the entering into by the successful bidder of a contract in accordance with the specifications.

Plans and specifications can be seen at the office of the Engineer at Alken, S. C. Anyone desiring to bid may obtain a copy of the plans by depositing with the Engineer a check for \$10, which will be returned upon return of the plans in good condition.

The Commissioners reserve the right to reject any and all bids.

HARRY SUDLOW, Engineer,
Alken, S. C.

Drainage Canals

NOTICE TO CONTRACTORS.

Sealed proposals will be received by the Board of Drainage Commissioners of the State of Florida, J. C. Laning, Secretary, until ten (10) o'clock A. M. Thursday, August 10, when they will be opened and read publicly, for excavating three drainage canals on the east coast of Florida, near Pompano, Fulford and Larkin. The aggregate length of these canals is sixteen (16) miles; bottom width twenty-five (25) feet; mean depth six (6) feet. Their construction requires the excavation of approximately 400,000 cubic yards of earth and 200,000 cubic yards of rock.

Specifications and blank forms upon which bids must be made can be obtained by application to J. O. Wright, Chief Drainage Engineer, Tallahassee, Florida.

The Board reserves the right to reject any or all bids.

J. O. WRIGHT,
Chief Drainage Engineer.

Artesian Well

Sealed bids will be received up to 12 o'clock noon of Thursday, July 27, 1911, by the town of Friars Point, Miss., on the furnishing of all material and the boring of an artesian well. Specifications may be obtained either from J. D. Robinson, City Clerk of Friars Point, Miss., or from F. G. Proutt, Consulting Engineer, 374 Randolph Building, Memphis, Tenn.

Proposals for the Confederate Memorial Institute, Richmond, Virginia

Sealed proposals will be received by the Hon. J. Taylor Ellyson, President of the Confederate Memorial Association, at his office, 924 Mutual Building, Richmond, Va., until 12 o'clock M. on Monday, August 7, 1911, and then opened, for the construction, complete (except heating and ventilating apparatus, electric conduits and wiring, gas-piping and lighting fixtures), for a building to be known as the "Confederate Memorial Institute." In accordance with drawings and specifications of Bissell & Sinkler, Architects, 805 Bailey Building, Philadelphia, Pa.

Copies of the drawings and specifications and forms of proposals may be obtained from the above Architects on or after Saturday, July 15, 1911. Each application must be accompanied by a certified check for \$500, payable to the order of the Confederate Memorial Association. The copies of the drawings and specifications must be returned to the Architects in good condition with the proposals, whereupon the above check will be returned; but upon failure of any bidder to return in good condition the drawings and specifications, the sum of \$25 will be forfeited and deducted from the amount of the above check. The right is reserved to reject any or all bids.

The contractor to whom the award is made will be required to furnish a bond of a surety company in the sum of 50 per cent. of the amount of the contract, guaranteeing the faithful performance of the contract.

Copies of the drawings and specifications may be seen also at the office of the Confederate Memorial Association, 924 Mutual Building, Richmond, Va.

Earth Dam and Appurtenances

CHANGE OF DATE.

Sealed proposals will be received by the Southern Assembly for the erection of an earth dam and appurtenances on the Assembly Grounds, near Waynesville, North Carolina, until noon on August 1, 1911. Specifications and general plans may be seen at office of Chief Engineer Southern Assembly, Waynesville, N. C., and at Manufacturers Record, where bidding sheets may be obtained.

Bidders are expected to examine the site and acquaint themselves with the local conditions. Certified check (or bond) for five hundred dollars (\$500), drawn in favor of Southern Assembly, must accompany each bid as evidence of good faith.

The Southern Assembly reserves the right to reject any and all bids.

J. W. SEAVER, JR., Ch. Engr.,
Waynesville, N. C.

Notice of Drainage Contract

GREENE AND LAWRENCE COUNTY DRAINAGE DISTRICT NO. 1.

Commissioners: Civil Engineer:
J. M. FUTRELL, C. E. WADDELL.

A. BERTIG, A. S. SNOWDEN.

The Commissioners of Greene and Lawrence County Drainage District will sell at public outcry, to the lowest responsible bidder, at the east door of the Courthouse, in the City of Paragould, Greene county, Arkansas, between 9 A. M. and 3 o'clock P. M., on Tuesday, August 1, 1911, the construction of the main canal and all laterals and sub-laterals of said district, as now designed and ordered constructed, being about 2,500,000 cubic yards.

Plans, maps and profiles and specifications can be seen by applying in person to A. S. Snowden, Secretary of the Board, Paragould, Arkansas.

A certified check for five per cent. of each contract let will be required of all bidders to guarantee the entering into of a good and sufficient contract and bond by the successful bidder.

The Board reserves the right to accept or reject any and all bids.
Work will be paid for in cash, as per contract to be signed.

GREENE AND LAWRENCE COUNTY DRAINAGE DISTRICT, ARKANSAS.

By J. M. FUTRELL, President.

Attest: A. S. SNOWDEN, Secretary.

Paragould, Arkansas, June 26, 1911.

Repairing Courthouse Floors

Augusta, Ga., July 15, 1911.

Sealed bids will be received at the office of the Board of County Commissioners of Richmond county at Augusta, Ga., until 12 o'clock M. August 15, 1911, for the evening of the floors of the corridors of the Courthouse and laying the same with Nonparell cork tiling. Plans and specifications may be had by applying at the office of the County Commissioners, or the Architect, Mr. Louis F. Goodrich. Bids to be opened in public August 15, 1911, the Commissioners reserving the right to reject any or all bids.

E. F. VERDERY,
Chairman.

JAS. T. GARDINER,
Clerk.

Pipe

Sealed proposals will be received by the Water and Light Committee of the town of Brownsville, Texas, until 3 P. M. August 1, 1911, for the following approximate quantities of pipe for water extensions:

1800 feet 4" pipe.
5320 feet 6" pipe.
3420 feet 8" pipe.
7240 feet 12" pipe.

Bids will be considered on both cast-iron and wood pipe constructed for a 250-foot head. The right is reserved to reject all bids. All bids must be filed with C. H. More, Chairman Water and Light Committee of city of Brownsville, not later than 3 P. M. August 1. E. L. Burks, Supt. Water and Light.

REFINED COAL TAR FOR SALE

1000 bbls. of Refined Coal Tar, suitable for paving or roofing. Will be sold at a sacrifice if disposed of at once. Will sell in bbls. or bulk. No reasonable offer refused. Address

THOS. W. PRITCHARD,
Wilmington, N. C.

PATENT YOUR IDEAS

Book "HOW TO OBTAIN A PATENT" and "WHAT TO INVENT" sent free. Send rough sketch for free report as to patentability. We advertise your patent for sale at our expense. Patent obtained or Fee Returned.

Patents for the Following Inventions are For Sale

AND WE WILL FURNISH FULL DETAILS UPON REQUEST

Automatic Tire Pump.
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Attachment for Sacking Scales.
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Belt.
Automatic Brake Retainer.
Supporting Rack.
Envelope Fastener.
Spike.
Bag Holder.
Road Drag.
Screen.
Duster for Vacuum Cleaner.
Railway Tie.
Smoke and Foul Air Evaporator.
Reel Carrier.
Horse Releaser.
Knife Blade.
Oilcan.
Hoof Spreader.
Jar Handle.
Wheelwright.
Bicycle Luggage Carrier.
Sash Lock.
Shock Absorber.
Check Hanger.
Heel.
Graphophone Attachment.
Trolley Pole.
Exhaust for Gas Engines.

Oil Tank Bracket.
Attachment for Windmill.
Match Box (U. S. and Foreign).
Hoe.
Starting Handle.
Currycomb (U. S. and Foreign).
Automatic Railway Gate.
Target.
Sheep Shear Device.
Hatpin Guard.
Magnet Generator Gear.
Nursery Chair.
Armor Casing for Tires.
Plow.
Ticket Holder.
Weed Destroyer.
Pulley.
Belt-Driven Motor.
Valve-Operating Mechanism.
Fan Attachment for Rocking Chairs.
Fishing Reel.
Fruit Picker.
Burglar Alarm.
Milking Pail Attachment.
Suspension Means for Elevators.
Door Catch.
Frame and Steering Mechanism for Grain Drill.
Folding Umbrella (U. S. and Foreign).
Garment Hanger.
Swimming Shoe.
Pusher Attach. for Hay Rakes.
Sewing Machine Attachment.
Fire Escape.
Hatpin.
Chimney Cap.

Wire Twister.
Plow Attachment.
Draw Bar.
Danger Signal for Automobiles.
Trap.
Animal Dipping Machine (U. S. and Canada).
Collapsible Crate.
Bicycle.
Combination Hand Brush.
Cup.
Nut Lock.
Fire Alarm.
Vehicle Hound.
Wire Fence.
Torpedo Cane.
Trace Protector.
Gate.
Rake.
Marking Pen.
Rope-making Machine.
Draft Equalizer.
Hinge.
Penholder.
Carcass Hanger.
Ice Road Maker.
Pump Apparatus.
Reflector.
Fender for Automobiles.
Attach. for Potato Diggers.
Bag-Fastening Device.
Log Slabbing Machine.
Attach. for Carbureters.
Combined Knife and Saw.
Wagon Cover.
Vent Stopper.
Limb-Supporting Device for Fruit Trees.
Surgical Appliance.
Wheeled Disk Fender.
Insect Trap.
Treadle-Power Coffee Mill.
Burner and Globe.
Tag.
Spring Wheel.
Wrench.

Slide-Curtain Supporter.
Folding Kite.
Window Sash.
Pump.
Vehicle Axle.
Railway Joint.
Device for Rolling Barbed Wire.
Clotheshorse.
Speed Indicator Attachment.
Clothesline Reel.
Envelope (U. S. and Canada).
Safety Stirrup Skagot.
Singletree.
Whistle.
Pencil Finger Rest.
Corner Rib Door.
Plowshare.
Hay-Unloading Jack.
Wagon-Box Support.
Split Carnation Mender.
Belt Shifter.
Building Block.
Metallic Tie and Rail Fastening.
Railway Tie.
Clotheswringer Attachment.
Ceiling Scraper.
Fly Killer.
Corn Shock Binder.
Coffee and Tea Pot.
Concrete Tie.
Plow Stock.
Bedclothes Rack.
Pump Attachment for Washing Apparatus.
Smoke Consumer.
Game.
Fly Shield for Horses.
Miner's Gas Lamp.
Derailing Device.
Wash Bench.
Carburetor.
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Wheel Construction.
Scrubbing Machine.
Renewable Fuse.
Lug Strap.

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"TIMBER TO BURN"

We have on our list some of the biggest bargains in tracts of timber, both soft and hard woods, that it has been our pleasure to offer the public, and intended buyers will do well to get our list.

We also have several coal properties for sale.

BELLER & WILSON

Headquarters for Timber and Coal. 402-404 Nat. Exchange Bank Bldg., ROANOKE, VA.

WATER-FRONT PROPERTY IN VIRGINIA

Suitable for factory development or private investment. 73½ acres high land, 6½ acres open water with a fine water-frontage of 1426 feet on Deep Creek near Gilmerton, close to Navy-Yard and not far from City of Portsmouth.

This excellent water-front property will become very valuable in the near future. At present there are railroad facilities within 500 yards. Will sell to quick purchaser for \$150.00 per acre.

S. L. NUSBAUM & CO.

Suite 600 Citizens' Bank Bldg., Norfolk, Va.

STEEL SHED FOR SALE

Steel frame shed suitable for factory; complete and ready to put up; 86x360 feet; clear span of 86 feet; height of post 20 feet.

C. M. ELLINGER

Fayette Street and East Avenue
BALTIMORE, MD.

VIRGIN PINE FOR SALE

Twenty-five million feet virgin pine, long and short leaf, on tidewater; \$5 rate to New York; ocean vessels land on property. Fifteen-year timber rights, \$50,000. Dandy investment. No agents; principals only.

J. O. RALEY, Cheraw, S. C.

LARGE CHEAP RANCH PROPERTIES, COLONIZATION TRACTS FOR SALE

Subject to irrigation by gravity canals or from shallow pumping wells and irrigated farms. We would like to have the co-operation of the Eastern real estate men in handling the many attractive properties that we can secure in this transpecos country. We have lived here for years and know the owners and the land and its values. This property all carries an attractive commission.

Write us for further particulars, literature, maps, etc.

JAS. GOODE REAL ESTATE CO.
PECOS, TEXAS

MANUFACTURING PLANT, LOGGING RAILROAD AND EQUIPMENT TIMBER AND TIMBER LANDS OFFERED FOR SALE

The Southern Carolina Lumber Company of Marion, S. C., offers for sale and solicits bids for the purchase of its manufacturing plant, logging railroad and equipment, timber and timber lands at or near Marion, South Carolina.

Briefly stated, the property includes a mill site of twenty acres, with ample railroad facilities; band-saw mill, capacity 50,000 feet day run; drykline, planing mill, stove mill, electric-light plant, store building, store goods and stock of merchandise, office building, boarding-house, five large dwelling-houses, about fifteen employees' houses, about 6122 acres of timber lands in fee; about 30,602 acres of timber, with time limit to cut, having thereon approximately 86,337,000 feet short-leaf pine, 31,608,000 feet of cypress, 45,311,000 feet of hardwood; about ten miles of logging railroad and rails, logging equipment, including locomotive, 25 logging cars, log loader and skidder.

Further detailed information will be furnished upon application to John H. Rademaker, Treasurer, Manistee, Michigan. Sealed bids will be received up to August 1, 1911, addressed to Charles F. Ruggles, President, at Manistee, Michigan. Envelopes should be endorsed "Bid for South Carolina Lumber Company property."

The bids will be opened at a meeting of the Board of Directors of said company to be held at Marion, S. C., on August 7, 1911. The right is reserved to reject any and all bids.

CHARLES F. RUGGLES,
President.

JOHN H. RADEMAKER,
Treasurer.
Manistee, Michigan.

Gilt Edge Securities For Sale

5% Farm Mortgages.
7% Improved City Property.
6% Private Corporation First Mortgage Bonds.

Write for information and Bank References.

KENNETH WIMER & COMPANY,
Investment Brokers, San Antonio, Texas.

Complete Saw Mill Plant, Dry Kiln and Logging Equipment

FOR SALE

Mill has a daily capacity of 25,000 feet. Logging outfit consists of Locomotive, three and one-half miles of tramroad and six log trucks. Eighteen to twenty million feet of choice Pine timber, well blocked. Mill located about 35 miles south of Savannah, on the Seaboard Air Line Railway. Fifteen to twenty million feet additional timber can be had in easy reach of this plant. For full particulars address

ALBERT FENDIG & CO., Brunswick, Ga.

ICE PLANT FOR SALE

Twenty-five-ton plant, practically new, well located in growing city of ten thousand. Good reasons for selling. Part cash. Balance terms. Address

J. R. FAIRCLOTH, DOTHAN, ALA.

OVERALLS PLANT FOR SALE

Complete equipment. Practically new and in excellent condition. Can be placed in operation immediately. Details upon application.

WILLARD BAG & MFG. CO., Wilmington, N. C.

Chair Factory For Sale

Controlling interest in chair factory situated in North Carolina. Factory in operation, with plenty of orders for product at a profit. Reason for selling, owner getting old and nonresident, can't devote time to business. For particulars address "Chairs," care of Manufacturers Record.

FREE SITES and CHEAP GAS

for all kinds of manufactures at

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which is located on the main line of the Baltimore & Ohio Railroad running from New York to St. Louis, and in the center of the greatest gas field of the world. Anyone interested in same can call upon or write

H. L. LAMBERT
Pennsboro, West Virginia.

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Auctioneers

An important announcement. A clean manufacturing property, a whole-some home for an industry, handsome mill buildings, a real water power privilege, pure water. Also a genteel Colonial residence, 22 parcels of village real estate, 2 wood lots and 570 lots of practically new cotton machinery in lots to suit purchasers.

The No. 2 Mill of the Uncasville Manufacturing Company, known as the Versailles Plant, at Versailles, Connecticut, pledged to the highest bona-fide bidders at absolute auction sale. Midway between the plants of the Baltic Mills Co. at Baltic Village and the Ponemah Mills at Taftville Village, two of the finest manufacturing properties in America. Is on the Little River, on opposite side of Shetucket River from the Totokett Mills. Is in the center of a nest of twenty or more industries up and down the Shetucket River and its tributaries, with Norwich and Willimantic at either end, and includes some of the most famous manufacturers of standard fine and fancy cottons, cotton and silk threads, silks and velvets in the country. All well established plants, rarely a change of ownership among them. The regularity with which extensions and improvements are made and the occasional location of a new plant are of much import. Abundant and permanent skilled labor from English, Scotch, French and Irish families. Providence-Willimantic Branch N. Y. N. H. & H. Railroad, trunk line of trolleys with express, freight and baggage system, State highway. Sale upon the premises, regardless of any condition of the weather, Thursday, the 27th day of July, 1911, commencing promptly at 10 o'clock in the forenoon with Lot One, the mill property, immediately followed by the twenty-three parcels of village property, the wood lots and the 570 lots of machinery in lots to suit purchasers. Illustrated and descriptive catalogue in great detail upon application at the office of the auctioneers, where all inquiries must be made.

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36x17 Sellers, compound rest, triple geared.
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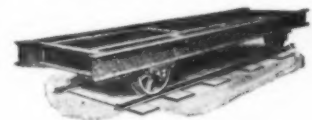
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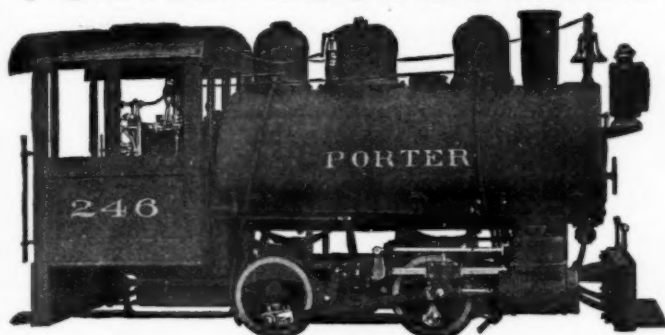
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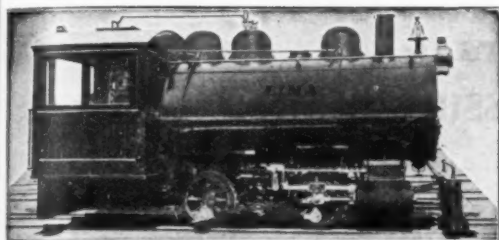
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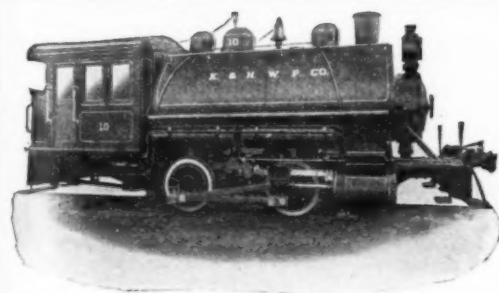
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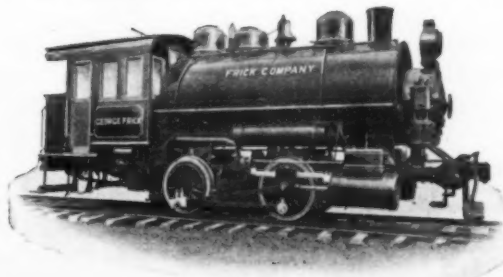
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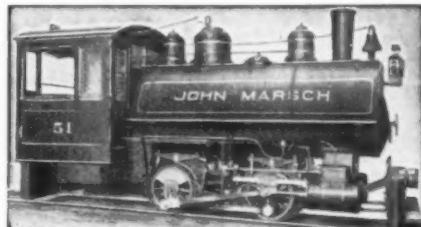
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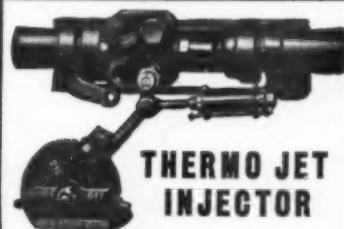
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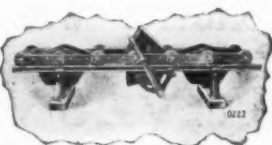
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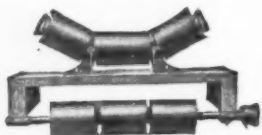
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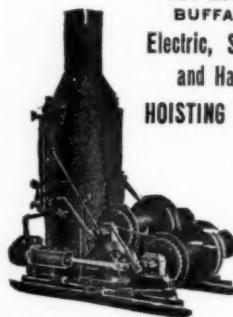
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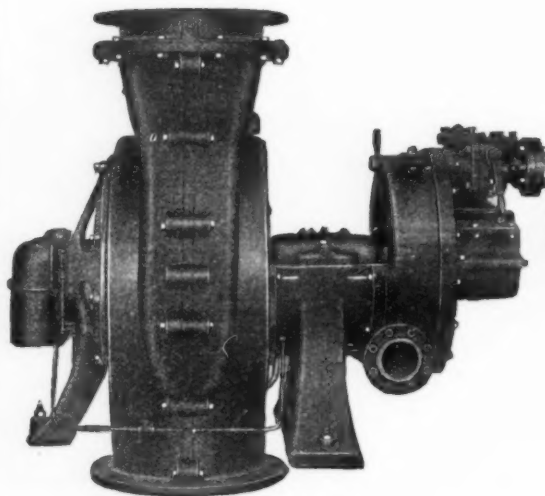
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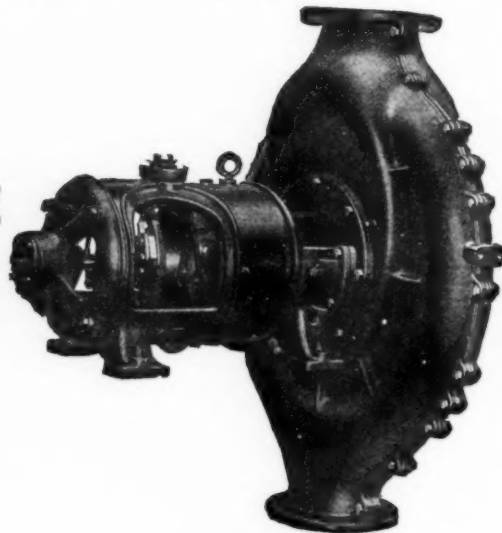
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The positive pressure blower has revolving drums which are subject to considerable air leakage if they clear each other, and on the other hand, if they come in contact they wear rapidly and cause leakage by reason of such wear. Centrifugal compressors are free from these defects as they have no rubbing parts inside the air space. Actual tests under similar operating conditions over long periods have proven the latter machine the more efficient.

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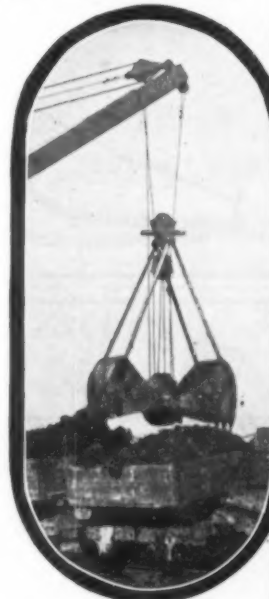
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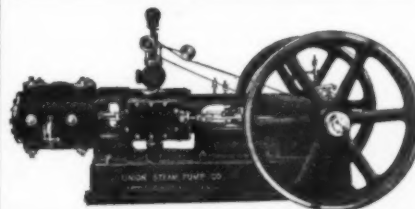
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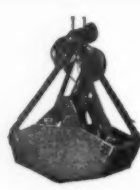
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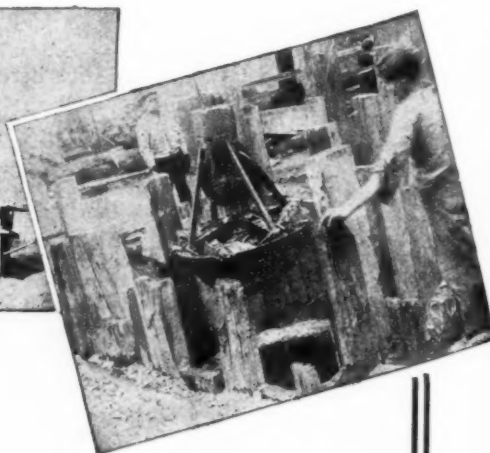
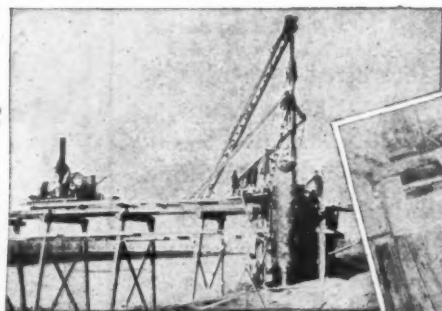
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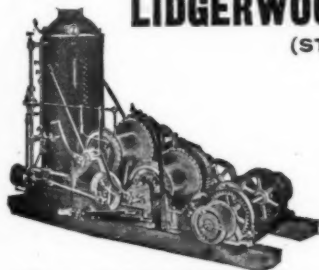
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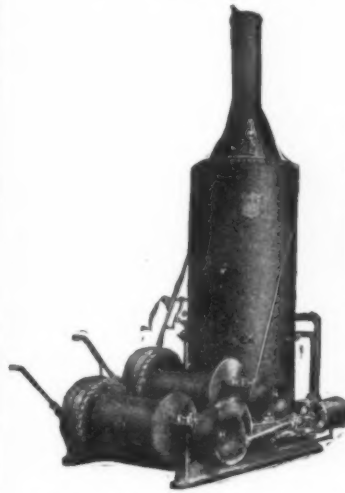
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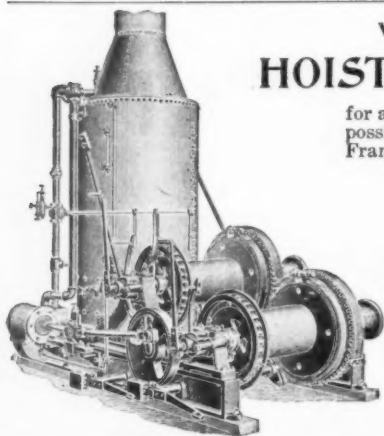
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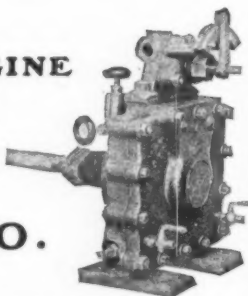
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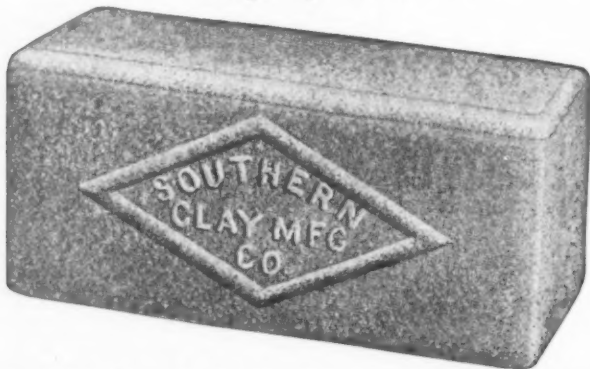
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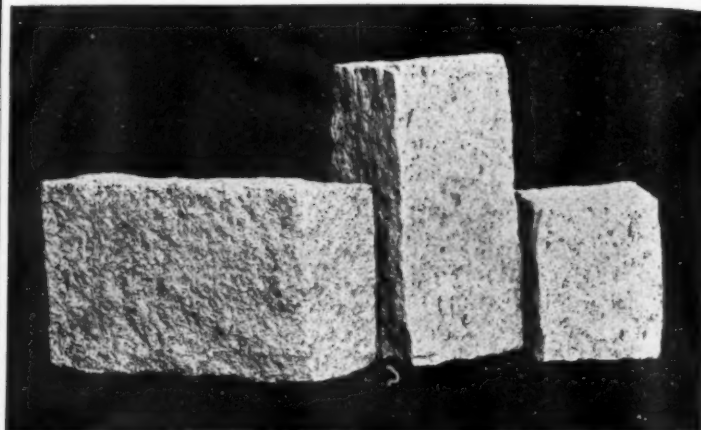
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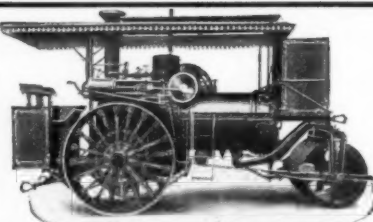
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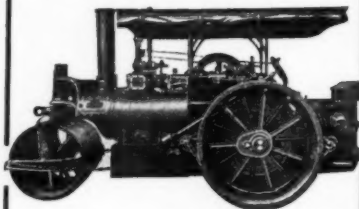
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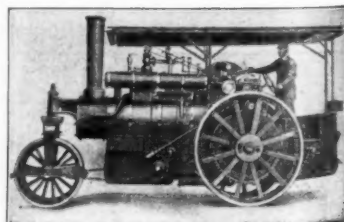
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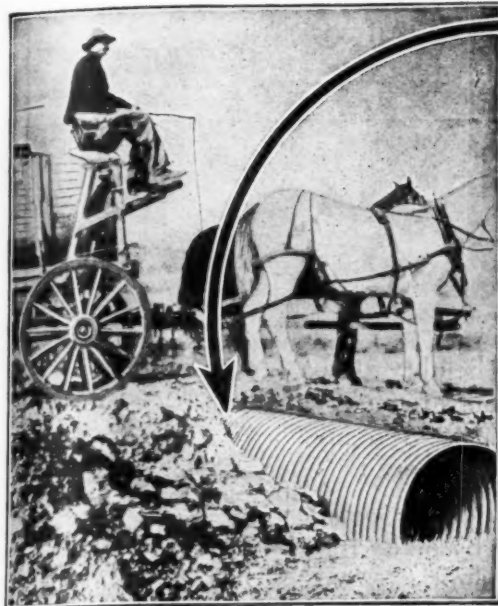
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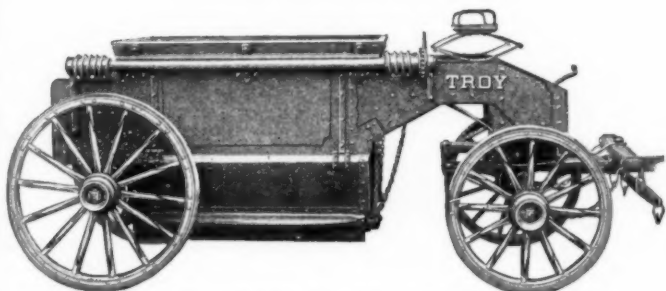
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MADE OF

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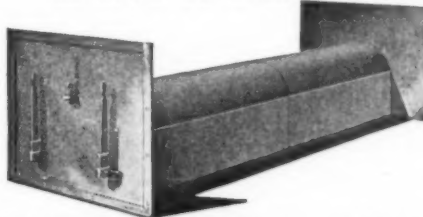


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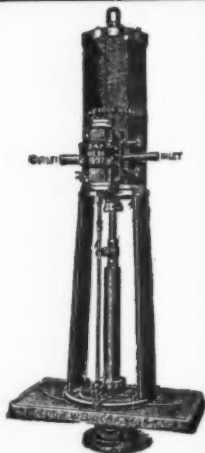
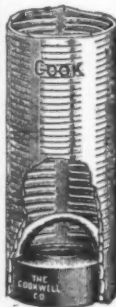
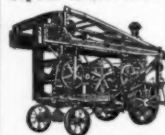
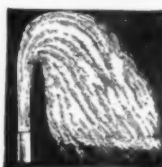
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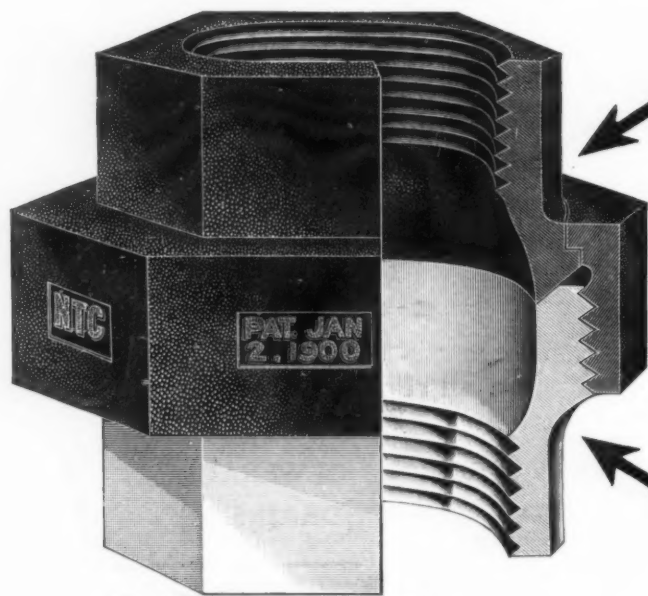
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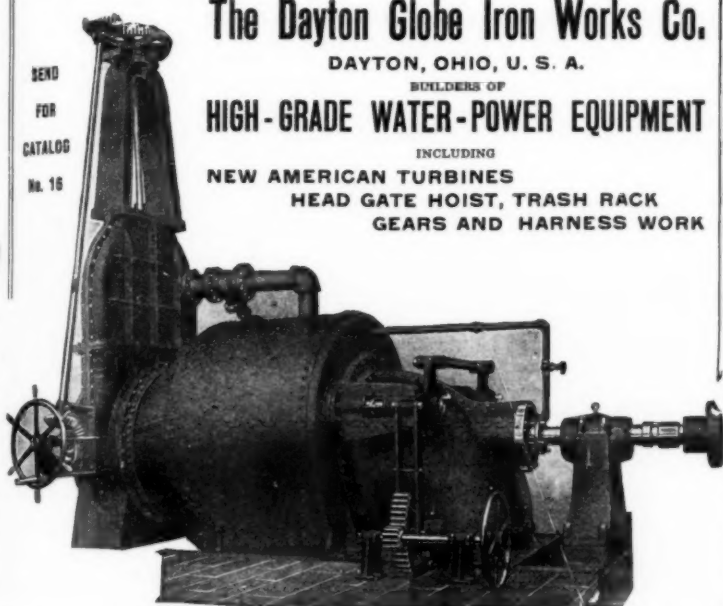
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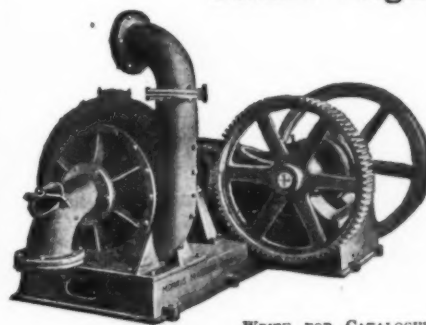
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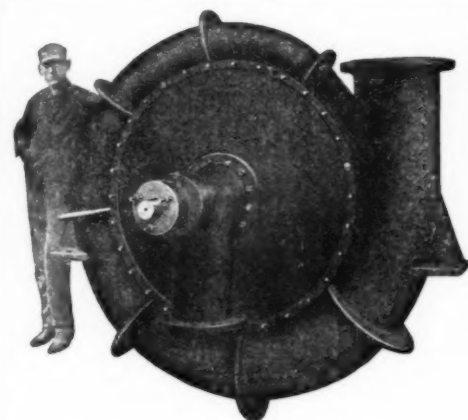
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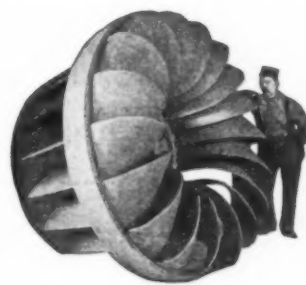


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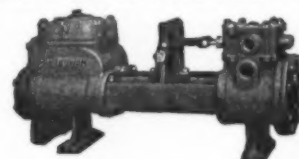
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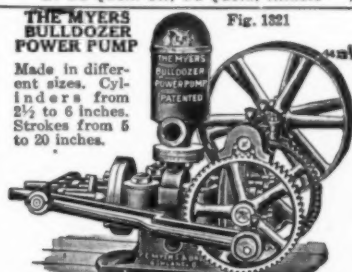
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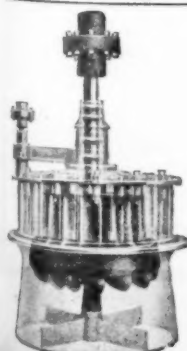
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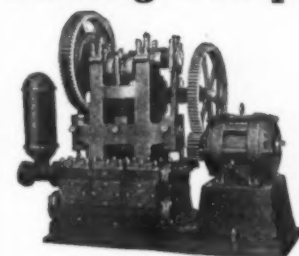
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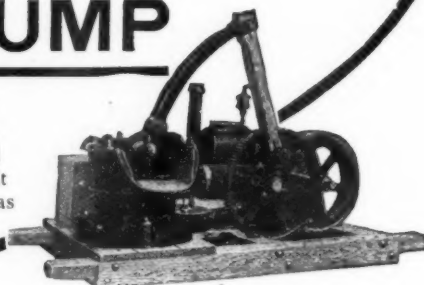


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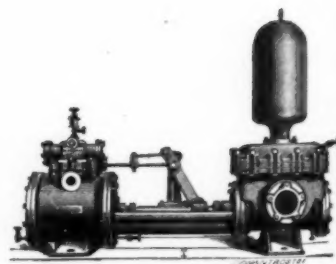
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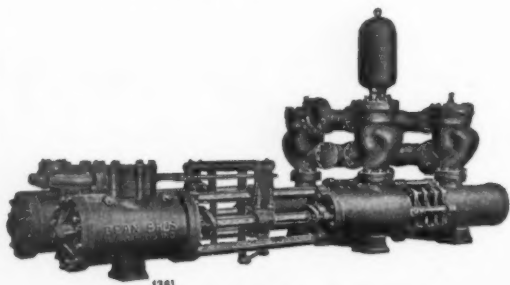
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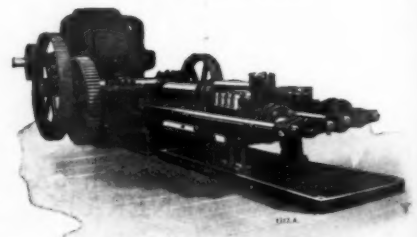
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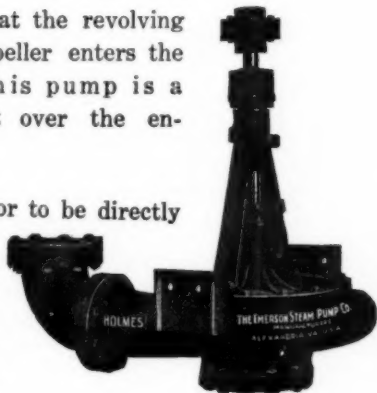


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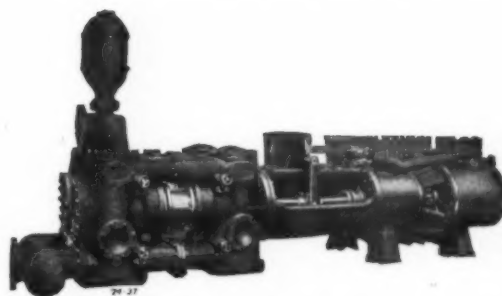
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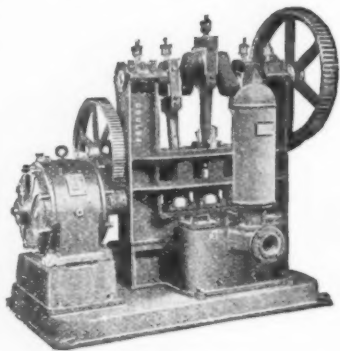
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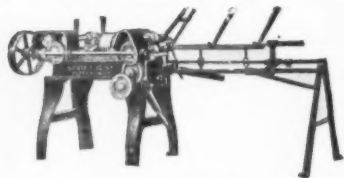
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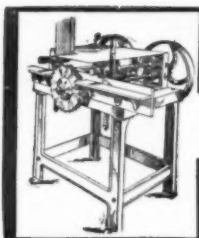
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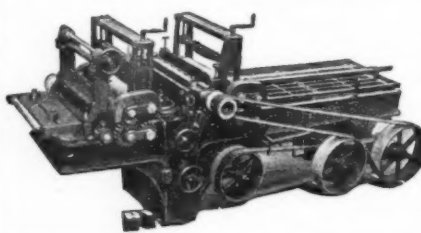
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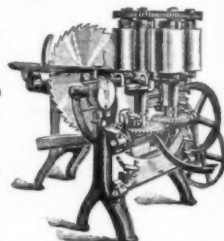
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The two bearings nearest the saw are cast in a single piece, and the one nearest the saw is held to the husk frame by a single large bolt. The other has bolts passing through elongated slots to allow for adjusting the arbor and its bearings in properly "lining" the saw. The end play of the arbor is taken up by collars on this central bearing, and the end box farthest from the saw is hung in a pivoted yoke, as is also the fourth box, provided with mills having a top saw. All are lined with a special high grade of anti-friction metal, and the caps and boxes are machined to fit together accurately and rigidly.

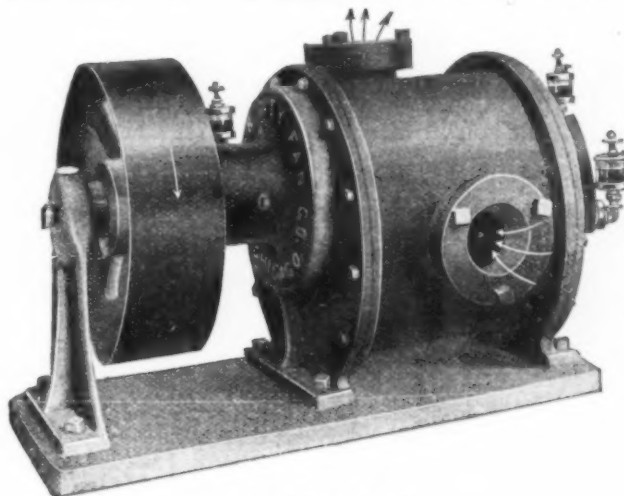
Our arbors are very easy to keep in adjustment, and it is much better to give the saw its lead by adjusting at the arbor bearings than to crowd the rim of the saw around by means of the saw guide pins. Every portion of our arbors is most carefully finished and balanced to run smoothly at the highest practical working speeds.

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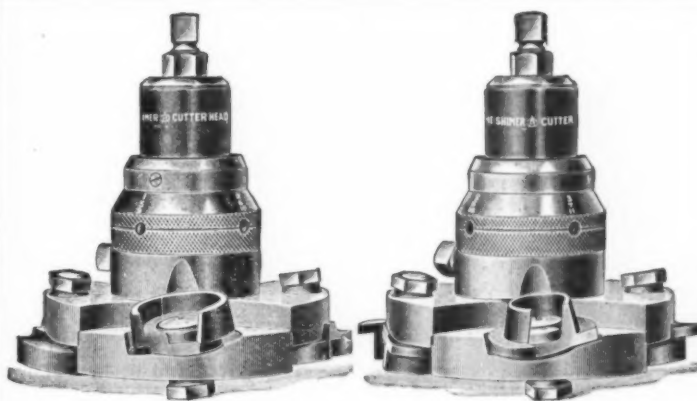
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Established 1879

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As an illustration of this latter fact:

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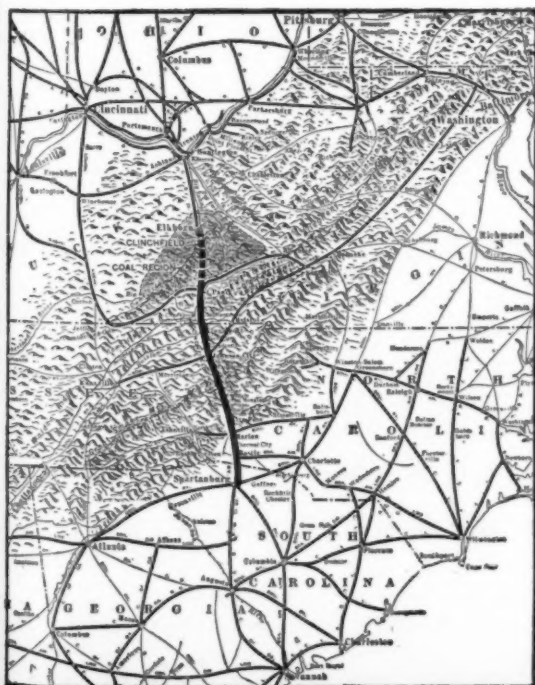
Reporting on this property, Dr. John Jermain Porter, Metallurgical Engineer of the University of Cincinnati, says:

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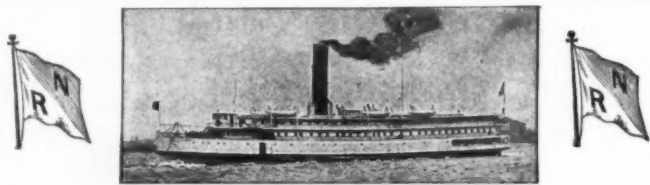
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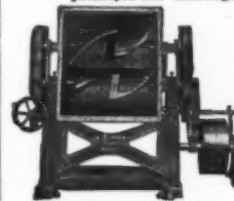
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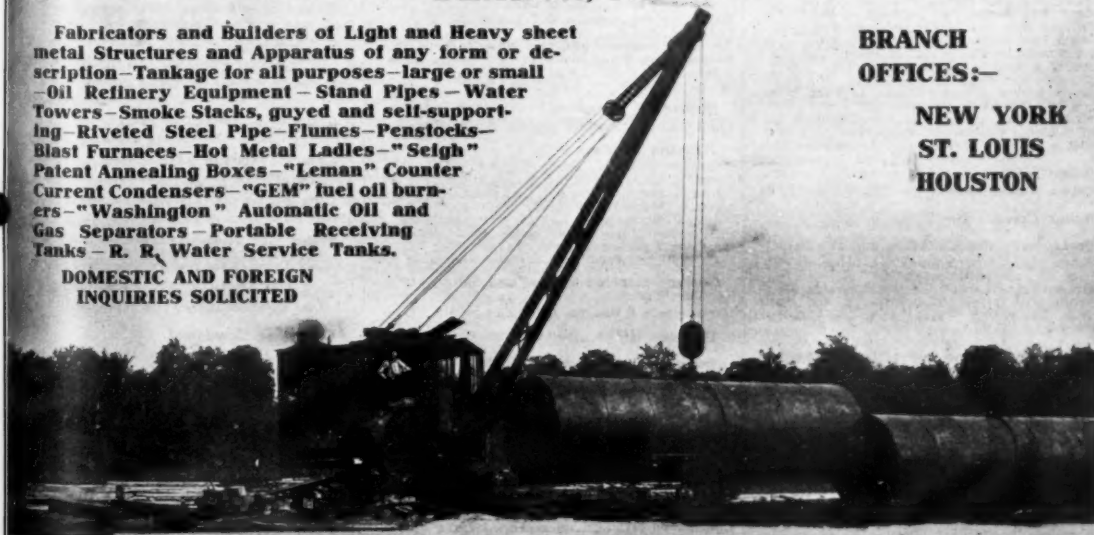
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- Bankers and Brokers.**
Baltimore Trust Co., Baltimore, Md.
Delaware Trust Co., Wilmington, Del.
Florida Trust Co., Jacksonville, Fla.
Glen, W. S., Spartanburg, S. C.
Guaranty State Bank & Trust Co., Dallas, Tex.
Halsey & Co., N. W., New York, N. Y.
Lisman & Co., F. J., New York, N. Y.
Mercantile Trust & Deposit Co., Baltimore, Md.
Nuveen & Co., John, Chicago, Ill.
Savannah Bank & Trust Co., Savannah, Ga.
Short & Son, John C., New York, N. Y.
Southern States Development Co., New York, N. Y.
Wimer & Co., Kenneth, San Antonio, Tex.
- Banks.**
First National Bank, Baltimore, Md.
First Nat'l Bank of Key West, Key West, Fla.
First National Bank, Richmond, Va.
Guaranty State Bank & Trust Co., Dallas, Tex.
Merchants National Bank, Baltimore, Md.
National Exchange Bank, Baltimore, Md.
Savannah Bank & Trust Co., Savannah, Ga.
- Bank and Office Railings and Grilles.** (Iron.)
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Buckeye Wire & Iron Works Co., Columbus, O.
Chesapeake Iron Works, Baltimore, Md.
Dow Wire Works, Louisville, Ky.
Dufur & Co., Baltimore, Md.
Dufur, Baggott & Co., Baltimore, Md.
Entey Wire Works Co., New York, N. Y.
Jones & Co., L. E., Baltimore, Md.
Meyers Mfg. Co., F. J., Hamilton, O.
Ohio Elevator & Machine Co., The, Columbus, O.
- Bank Fixtures.**
Quincy Show Case Works, Quincy, Ill.
Ruse & Thompson, Baltimore, Md.
- Bar Iron.** (Refined and Galvanized.)
Carnegie Steel Co., Pittsburg, Pa.
Nicoetown Plate Washer Co., Philadelphia, Pa.
- Bars, Wire, Wire Fabric, etc.** (Steel for Concrete-Steel Construction.)
American Steel & Wire Co., Chicago, Ill.
American System of Reinforcing, Chicago, Ill.
Cincinnati Iron & Steel Co., Cincinnati, O.
Clinton Wire Cloth Co., Clinton, Mass.
Concrete-Steel Co., The, New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Franklin Steel Co., Franklin, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburg, Pa.
Southern Steel Products Co., Inc., Richmond, Va.
Wight & Co., W. N., New York, N. Y.
- Bearings.** (Ball.)
Hyatt Roller Bearing Co., Newark, N. J.
Standard Roller Bearing Co., Philadelphia, Pa.
- Bearings.** (Brass Journal.)
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
- Bearings.** (Oilless.)
North Amer. Metaline Co., Long Island City, N. Y.
- Bearings.** (Roller.)
Hyatt Roller Bearing Co., Newark, N. J.
Standard Roller Bearing Co., Philadelphia, Pa.
- Bells.** (Call.)
Holtzer & Cabot Electric Co., Brookline, Mass.
- Bells and Gongs.**
National Tube Co., Pittsburg, Pa.
Western Electric Co., New York, N. Y.
- Belting.** (Leather, Canvas, Rubber.)
American Supply Co., Providence, R. I.
Bailey-Lebby Co., Charleston, S. C.
Baltimore Belting Co., Baltimore, Md.
Cameron & Barkley Co., Charleston, S. C.
Chesapeake Belting Co., Baltimore, Md.
Diamond Rubber Co., Akron, O.
Dick, Ltd., R. & J., Passaic, N. J.
Druid Oak Belting Co., Inc., The, Baltimore, Md.
Gandy Belting Co., Baltimore, Md.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Rosedale-Reddaway R. & H. Co., Newark, N. J.
Williams & Sons, I. B., Dover, N. H.
- Belting.** (Chain.)
Bartlett & Snow Co., C. O., Cleveland, O.
Caldwell & Son Co., H. W., Chicago, Ill.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Co., Nicoetown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.
- Belt Conveyors.**
Jeffrey Mfg. Co., Columbus, O.
Robins Conveying Belt Co., New York, N. Y.
- Belt Dressing.**
Diamond Rubber Co., Akron, O.
Gandy Belting Co., Baltimore, Md.
- Belt Fasteners.**
Crescent Belt Fastener Co., New York, N. Y.
- Bicarbonate Soda.** (Sap Stain Lumber Dip.)
Church & Dwight Co., New York, N. Y.
- Blackboards.** (Slate.)
East Bangor Com. Slate Co., The, East Bangor, Pa.
Hower, J. K., Slattington, Pa.
Johnson, E. J., New York, N. Y.
- Block Tackle.** (For Wire or Manila Rope.)
Patterson Co., W. W., Pittsburg, Pa.
- Blowers.** (Soot.)
Bayer Steam Soot Blower Co., St. Louis, Mo.
- Blowers and Exhaust Fans.**
American Blower Co., Detroit, Mich.
Buffalo Forge Co., Buffalo, N. Y.
Clark Co., Geo. P., Windsor Locks, Conn.
De Laval Steam Turbine Co., Trenton, N. J.
Garden City Fan Co., Chicago, Ill.
General Electric Co., Schenectady, N. Y.
Green Fuel Economizer Co., Matteawan, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Savannah Blow Pipe Co., Savannah, Ga.
Skinner Bros. St. Louis, Mo.
Standard Blower & Metal Mfg. Co., Atlanta, Ga.
Sturtevant Co., B. F., Hyde Park, Mass.
- Blueprint Apparatus.**
Keuffel & Esser, Hoboken, N. J.
- Boilers.**
Abendroth & Root Mfg. Co., Newburgh, N. Y.
Ames Iron Works, Oswego, N. Y.
Babeck & Wilcox Co., New York, N. Y.
Brownell Co., Dayton, O.
Cameron & Barkley Co., Charleston, S. C.
Casey-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago House Wrecking Co., Chicago, Ill.
Cole Mfg. Co., R. D., Newman, Ga.
Cooper Co., C. & G., Mt. Vernon, O.
Gibbs Machinery Co., Columbus, S. C.
Hartley Boiler Works, Montgomery, Ala.
Heine Safety Boiler Co., St. Louis, Mo.
Keeler Co., E., Williamsport, Pa.
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
Lounard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Petroleum Iron Works, Co., Sharon, Pa.
Phoenix Iron Works Co., Meadville, Pa.
Price Machinery Co., S. M., Norfolk, Va.
Schiffel & Sons Co., J. S., Macon, Ga.
Smith-Courtney Co., Richmond, Va.
Southern Engine & Boiler Works, Jackson, Tenn.
Union Iron Works Co., Selma, Ala.
Valk & Murdoch Iron Works, Charleston, S. C.
Vogt Machine Co., Henry, Louisville, Ky.
Walsh & Weidner Boiler Co., Chattanooga, Tenn.
- Boiler Setting.**
Harbison-Walker Refractories Co., Pittsburg, Pa.
- Boiler Tubes.** (See Tubes, Boiler.)
- Bolts, Nuts, Rivets, Studs and Washers.**
Lebanon Valley Iron & Steel Co., Lebanon, Pa.
Milton Mfg. Co., Milton, Pa.
Nicoetown Plate Washer Co., Philadelphia, Pa.
Republic Iron & Steel Co., Pittsburg, Pa.
Russell, Burdall & Ward Bolt & Nut Co., Port Chester, N. Y.
- Bonded Warehouse.** (For Manufacturers.)
Candler Warehouse Co., Atlanta, Ga.
- Bonds.** (Surety, etc.)
Fidelity & Deposit Co., Baltimore, Md.
- Boots.** (Rubberhide for Miners and Contractors.)
Rubberhide Co., Boston, Mass.
- Boring.** (Cylinder.)
Strickland Machine Co., Richmond, Va.
- Bottling Outfits.**
Vilter Mfg. Co., Milwaukee, Wis.
- Box Shooks.**
Naylor & Co., S. E., Guilford, Mass.
- Brass Goods.**
Bailey-Lebby Co., Charleston, S. C.
Buckeye Iron & Brass Works, Dayton, O.
Powell Co., Wm., Cincinnati, O.
- Brazings.** (Cast Iron.)
Richmond Machine Works, Inc., Richmond, Va.
Strickland Machine Co., Richmond, Va.
- Brewers' Machinery.**
Vilter Mfg. Co., Milwaukee, Wis.
- Brick.** (Building.)
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Carolina Portland Cement Co., Charleston, S. C.
Hood, B. Millin, Atlanta, Ga.
Hydraulic Pressed Brick Co., St. Louis, Mo.
Oceone Brick & Tile Co., Millersville, Pa.
Powhatan Clay Mfg. Co., Richmond, Va.
Southern Clay Mfg. Co., Chattanooga, Tenn.
- Brick.** (Hast Furnace, Coke Oven.)
Ashland Fire Brick Co., Ashland, Ky.
Hood, B. Millin, Atlanta, Ga.
Southern Clay Mfg. Co., Chattanooga, Tenn.
- Brick.** (Fire Clay.)
Ashland Fire Brick Co., Ashland, Ky.
Brookhaven Pressed Brick & Mfg. Co., Brookhaven, Miss.
Harbison-Walker Refractories Co., Pittsburg, Pa.
Kilian Fire Brick Works, Killian, S. C.
Louisville Fire Brick Works, Highland Park, Ky.
Pomona Terra-Cotta Co., Pomona, N. C.
Powhatan Clay Mfg. Co., Richmond, Va.
Southern Clay Mfg. Co., Chattanooga, Tenn.
Stevens' Sons Co., H., Macon, Ga.
Taylor Sons Co., Chas., Cincinnati, O.
Union Mining Co., Mt. Savage, Md.
- Brick.** (Magnesia.)
Harbison-Walker Refractories Co., Pittsburg, Pa.
- Brick.** (Paving.)
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Shale Brick Co., Birmingham, Ala.
Southern Clay Mfg. Co., Chattanooga, Tenn.
- Brick.** (Silica.)
Harbison-Walker Refractories Co., Pittsburg, Pa.
- Brick Machinery.** (Sand Lime.) [See Sand-Lime Brick Machinery.]
- Brick and Clayworking Machinery and Supplies.**
American Clay Mchry. Co., The, Bucyrus, O.
Carnell, George, Philadelphia, Pa.
Fennholtz Brick Machinery Co., St. Louis, Mo.
Freese & Co., E. M., Gallon, O.
Gibbs Machinery Co., Columbus, S. C.
Scott-Madden Iron Works, Keokuk, Iowa.
Steele & Sons, J. C., Statesville, N. C.
Taplin-Rice-Clerkin Co., Akron, O.
- Bridges.** (Concrete.)
Concrete Steel Engineering Co., New York, N. Y.
Raymond Concrete Pile Co., New York, N. Y.
Roanoke Bridge Co., Roanoke, Va.
- Bridges.** (Rolling Lift.)
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
- Bridges.**
American Bridge Co. of New York, New York, N. Y.
Baltimore Bridge Co., Baltimore, Md.
Belmont Iron Works, Inc., Philadelphia, Pa.
Chicago Bridge & Iron Wks., Chicago, Ill.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Farris Bridge Co., Pittsburg, Pa.
Missouri Val. B'dge & Iron Co., Leavenworth, Kan.
Morris, Wheeler & Co., Philadelphia, Pa.
Owego Bridge Co., Owego, N. Y.
Ritter-Conley Mfg. Co., Pittsburg, Pa.
Roanoke Bridge Co., Roanoke, Va.
Scherzer Rolling Lift Bridge Co., Chicago, Ill.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
- Bridge and Structural Iron Paints.**
Carolina Portland Cement Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.
Dixon Crucible Co., Joseph, Jersey City, N. J.
Standard Paint Co., New York, N. Y.
- Brimstone.**
Union Sulphur Co., New York, N. Y.
- Buckets.** (Excavators.)
Brown Mfg. Co., Mansfield, O.
Hayward Co., New York, N. Y.
Monaghan Mch. Co., Chicago, Ill.
Owen Bucket Co., Cleveland, O.
Williams Co., The G. H., Cleveland, O.
- Buckets.** (Ore, etc.)
Brown Hoisting Mchry. Co., Cleveland, O.
Browning Mfg. Co., Mansfield, O.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Hayward Co., New York, N. Y.
Link-Belt Co., Nicoetown (Philadelphia), Pa.
Owen Bucket Co., Cleveland, O.
Williams Co., The G. H., Cleveland, O.
- Buhr Stones.**
Starr Co., B. F., Baltimore, Md.
- Builders and Contractors.**
Falls City Construction Co., Louisville, Ky.
Farris Bridge Co., Pittsburg, Pa.
Raymond Concrete Pile Co., New York, N. Y.
Selden-Breck Construction Co., St. Louis, Mo.
Union-Spoon Construction Co., Washington, D. C.
White & Co., J. G., New York, N. Y.
- Buildings.** (Financed.)
Falls City Construction Co., Louisville, Ky.
- Building Supplies.**
Armstrong Mfg. Co., Richmond, Va.
Birely & Co., C., Atlanta, Ga.
Carolina Portland Cement Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
National Mortar & Supply Co., Pittsburg, Pa.
Southeastern Lime & Cement Co., Charleston, S. C.
Southern Building Material Co., Norfolk, Va.
Southern Steel Products Co., Inc., Richmond, Va.
- Burlap—Inserted Roofing and Siding.** (Flexible Cement.)
Bermingham & Seaman Co., Chicago, Ill.
- Burners.** (Oil.) [See Fuel Oil Equipments.]
- Bushings.** (Oilless, for Loose Pulleys.)
North Amer. Metaline Co., Long Island City, N. Y.
- Cables.**
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Roebeling's Sons Co., John A., Trenton, N. J.
Williamsport Wire Rope Co., Williamsport, Pa.
- Cableways.** (Overhead Suspension.)
Broderick & Bascom Rope Co., St. Louis, Mo.
Flory Mfg. Co., S., Bangor, Pa.
Lidgerwood Mfg. Co., New York, N. Y.
Mead-Morrison Mfg. Co., Cambridgeport, Mass.
Roebeling's Sons Co., John A., Trenton, N. J.
- Can and Box Making Machinery.** (Tin.)
Bliss Co., E. W., Brooklyn, N. Y.
- Cans.**
New Orleans Rfg. & Metal Wks., New Orleans, La.
Southern Can Co., Baltimore, Md.
United States Can Co., Cincinnati, O.
- Canning Machinery and Supplies.**
Cannery & Packers' Supply Co., Baltimore, Md.
Robins & Co., A. K., Baltimore, Md.
Sinclair-Scott Co., Baltimore, Md.
Sprague Canning Machinery Co., Chicago, Ill.
- Carborundum Paper and Cloth.**
Carborundum Co., Niagara Falls, N. Y.
- Card Clothing.**
American Supply Co., Providence, R. I.
- Cars.** (Dump, Industrial Logging and Mpe.)
Austin Mfg. Co., Chicago, Ill.
Baldwin Equipment & Supply Co., Chicago, Ill.
Chase Fdry. & Mfg. Co., Columbus, O.
Electric Wheel Co., Quincy, Ill.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hunt Co., C. W., West New Brighton, N. Y.
Kilbourne & Jacobs Mfg. Co., Columbus, O.
Males Co., The, Cincinnati, O.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Raleigh Iron Works Co., Raleigh, N. C.
Union Iron Works, Selma, Ala.
- Cars.** (Passenger and Freight.) [See Railroad Equipment and Supplies.]
- Car Couplers and Knuckles.**
Safety Car H't'g & L'ght'g Co., New York, N. Y.
- Car Lighting and Heating.**
Safety Car H't'g & L'ght'g Co., New York, N. Y.
- Car Wheels, Axles and Trucks.**
Carnegie Steel Co., Pittsburg, Pa.
Oliver Mfg. Co., Wm. J., Knoxville, Tenn.
Union Iron Works, Selma, Ala.
- Casters.**
Clark Co., Geo. P., Windsor Locks, Conn.
- Castings.** (Aluminum.)
Aluminum Company of America, Pittsburg, Pa.
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
- Castings.** (Brass and Bronze.)
Gilbert & Sons Brass Fdry. Co., A., St. Louis, Mo.
Phosphor-Bronze Smelting Co., Phila., Pa.
Richmond Machine Works, Inc., Richmond, Va.
Stratton & Bragg Co., Petersburg, Va.
- Castings.** (Iron, Gray, etc.)
Columbian Iron Works, Chattanooga, Tenn.
Gibbs Machinery Co., Columbus, S. C.
Georgia Car & Locomotive Co., Atlanta, Ga.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
Scott-Madden Iron Works, Keokuk, Iowa.
Paule Engineering & Machine Co., Baltimore, Md.
Roquette Foundry & Supply Co., Massena, N. Y.
Roanoke Iron Works, Inc., Roanoke, Va.
Robins Conveying Belt Co., New York, N. Y.
Ross-Mechan Foundry Co., Chattanooga, Tenn.
Stratton & Bragg Co., Petersburg, Va.
U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
Valk & Murdoch Iron Works, Charleston, S. C.
Westbrook Elevator Co., Danville, Va.
- Castings.** (Malleable Iron and Steel.)
Columbus Malleable Casting Co., Columbus, O.
Dayton Malleable Iron Co., Dayton, O.
Missouri Malleable Iron Co., East St. Louis, Ill.
- Castings.** (Steel.)
Crucible Steel Castings Co., Lansdowne, Pa.
Furness & Co., R. C., Baltimore, Md.
Reliance Steel Casting Co., Pittsburg, Pa.
Riverside Steel Casting Co., Newark, N. J.
- Ceilings.** (Metal.)
Edwards Manufacturing Co., Cincinnati, O.
Keighly Metal Cell. & Mfg. Co., S., Pittsburg, Pa.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Cement.**
Alpha Portland Cement Co., Easton, Pa.
American Cement Co., Philadelphia, Pa.
Carolina Portland Cement Co., Charleston, S. C.
Cincinnati Portland Cement Co., Cincinnati, Tenn.
Dixie Portland Cement Co., Chattanooga, Tenn.
Hartman Cement Co., Wm. G., Philadelphia, Pa.
Ironport Portland Cement Co., Ironport, O.
Kirkpatrick Sand & Cem. Co., Birmingham, Ala.
Kosmos Portland Cement Co., Louisville, Ky.
Lehigh Portland Cement Co., Allentown, Pa.
Security Cement & Lime Co., Baltimore, Md.
Southeastern Lime & Cement Co., Charleston, S. C.
Southern States Portland Cem. Co., Rockmart, Ga.
- Cement.** (Liquids.)
Glidden Varnish Co., Cleveland, O.
- Cement Machinery.**
Aising Engineering Co., J. R., New York, N. Y.
Power & Mining Machinery Co., Canby, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Chemists.**
Davis, Geo. G., Philadelphia, Pa.
Froehling & Robertson, Richmond, Va.
McKenna, Dr. Chas. F., New York, N. Y.
- Chimneys.** (Steel-Concrete.)
Weber Chimney Co., Chicago, Ill.
- Chloride Accumulator.**
Electric Storage Battery Co., The, Phila., Pa.
- Chucks.**
Morse Twist Drill & Mch. Co., New Bedford, Mass.
- Cities and Towns.** (Commercial and Industrial Opportunities.) [See Industrial, Agricultural and Commercial Opportunities.]
- Clayworking Machinery.** [See Brick and Clayworking Machinery and Supplies.]
- Cleamsing Compound.** (Floors, etc.)
India Alkali Works, Boston, Mass.
- Clocks.** (Watchman.)
Holtzer & Cabot Electric Co., Brookline, Mass.
- Clutches.**
Dodge Manufacturing Co., Mishawaka, Ind.
Positive Clutch & Pulley Works, Buffalo, N. Y.
- Coal.**
Alabama Con. Coal & Iron Co., Birmingham, Ala.
Cincinnati Coal Corp., Spartanburg, S. C.
Cincinnati Fuel Co., Spartanburg, S. C.
Consolidation Coal Co., Inc., New York, N. Y.
Flat Top Fuel Co., Bluefield, W. Va.
Hammond-Bryd Co., Birmingham, Ala.
Tennessee Coal, Iron & R. R. Co., B'gh'm, Ala.
Yolande Coal & Coke Co., Birmingham, Ala.

- Engines.**
GAS AND GASOLINE.
 Blaisdell Machinery Co., Bradford, Pa.
 Bogart Gas Power Eng. Co., Buffalo, N. Y.
 Du Bois Iron Works, Du Bois, Pa.
 Fairbanks, Morse & Co., Chicago, Ill.
 Foss Gas Engine Co., Springfield, O.
 Gibbs Gas Engine Co., Atlanta, Ga.
 Metz, A., New York, N. Y.
 Westinghouse Machine Co., The, Pittsburg, Pa.
OIL.
 De La Vergne Machine Co., New York, N. Y.
 Metz, A., New York, N. Y.
Engines. (Steam.)
 Allis-Chalmers Co., Milwaukee, Wis.
 American Blower Co., Detroit, Mich.
 American Engine Co., Round Brook, N. J.
 American Holst & Derrick Co., St. Paul, Minn.
 Ames Iron Works, Oswego, N. Y.
 Atlas Engine Works, Indianapolis, Ind.
 Ball Engine Co., Erie, Pa.
 Brownell Co., The, Dayton, O.
 Buffalo Forge Co., Buffalo, N. Y.
 Cameron & Barkley Co., Charleston, S. C.
 Chicago House Wrecking Co., Chicago, Ill.
 Cooper Co., C. & G., Mt. Vernon, O.
 Duke Engine Co., Grand Haven, Mich.
 Engberg's Elect. & Mech. Works, St. Joseph, Mo.
 Gibbs Machinery Co., Columbia, S. C.
 Greenwald Co., I. & E., Cincinnati, O.
 Griffith & Wedge Co., The, Zanesville, O.
 Harrisburg Fdry. & Mach. Wks., Harrisburg, Pa.
 Hooven, Owen, Reischler Co., Hamilton, O.
 Houston, Stanwood & Gamble Co., Cincinnati, O.
 Leffel & Co., James, Springfield, O.
 Lombard Iron Works, Augusta, Ga.
 Mecklenburg Iron Works, Charlotte, N. C.
 Morris Machine Works, Indianapolis, Ind.
 Murray Iron Works Co., Burlington, Ia.
 Phoenix Iron Works Co., Meadville, Pa.
 Price Machinery Co., S. M., Norfolk, Va.
 Purser, J. R., Charlotte, N. C.
 Ridgway Dynamo & Engine Co., Ridgway, Pa.
 Schofield's Sons Co., J. S., Mason, Ga.
 Smith-Courtney Co., Richmond, Va.
 Southern Engine & Boiler Works, Jackson, Tenn.
 Sturtevant Co., B. F., Hyde Park, Mass.
 Union Iron Works Co., Selma, Ala.
 Vilter Mfg. Co., Milwaukee, Wis.
 Westinghouse Machine Co., Pittsburg, Pa.
Engines. (Truck and Automobile.)
 Black & Decker Mfg. Co., Baltimore, Md.
Envelopes.
 Young & Selden Co., Baltimore, Md.
Excavating Machinery. (Steam Shovels, etc.)
 American Holst & Derrick Co., St. Paul, Minn.
 American Locomotive Co., New York, N. Y.
 American Steel Dredge Co., Ft. Wayne, Ind.
 Baldwin Equipment & Supply Co., Chicago, Ill.
 Browning Mfg. Co., Mansfield, O.
 Bucyrus Co., The, So. Milwaukee, Wis.
 Fairbanks Steam Shovel Co., Marion, O.
 Hayward Co., New York, N. Y.
 Jeffrey Mfg. Co., Columbus, O.
 Lidgerwood Mfg. Co., New York, N. Y.
 Males Co., Cincinnati, O.
 Marion Steam Shovel Co., Marion, O.
 Monaghan Machine Co., Chicago, Ill.
 Owen Bucket Co., Cleveland, O.
 Williams Co., The G. H., Cleveland, O.
Excelsior Machinery.
 Kline, Lewis T., Alpena, Mich.
Exhaust Heads.
 Abendroth & Root Mfg. Co., Newburgh, N. Y.
 American Spiral Pipe Works, Chicago, Ill.
 Greenwald Co., I. & E., Cincinnati, O.
 Hoppes Mfg. Co., Springfield, O.
Exhibits. (Machinery Builders' Equipment and Supplies.)
 Bonrse, The, Philadelphia, Pa.
 Builders' Exchange, Baltimore, Md.
Expansion Joints.
 Allberger Condenser Co., New York, N. Y.
 Badger & Sons Co., E. B., Boston, Mass.
Explosives.
 du Pont de Nemours Powder Co., E. I., Wilmington, Del.
Factory Sites. (Town and Railroad.) [See Industrial, Agricultural and Commercial Opportunities.]
Fans. (Electric.)
 Bates & Bro. Co., D. L., Dayton, O.
 Doubleday Hill Electric Co., Pittsburg, Pa.
 General Electric Co., Schenectady, N. Y.
 Lee Electric Co., Baltimore, Md.
 Robbins & Myers Co., Springfield, O.
 Western Electric Co., New York, N. Y.
 Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.
Fans. (Ventilating.) [See Blowers, Exhaust Fans.]
Fans. (Water and Belt Driven.)
 Bates & Bro. Co., D. L., Dayton, O.
Fastener Driving Machine. (Corrugated Joint.)
 Saranac Machine Co., St. Joseph, Mich.
Feed-Water Heaters and Purifiers.
 Allberger Condenser Co., New York, N. Y.
 American Water Softener Co., Philadelphia, Pa.
 Blake & Knowles Steam Pump Works, New York, N. Y.
 Brownell Co., Dayton, O.
 Exeter Machine Works, Pittston, Pa.
 Gibbs Machinery Co., Columbia, S. C.
 Greenwald Co., I. & E., Cincinnati, O.
 Hoppes Mfg. Co., Springfield, O.
 McAduo, Thomas, Philadelphia, Pa.
 Murray Iron Works Co., Burlington, Ia.
 National Pipe Bending Co., New Haven, Conn.
 Seuffe & Sons Co., Wm. B., Pittsburg, Pa.
 Stewart Heater Co., Buffalo, N. Y.
 Wheeler Condenser & Eng. Co., New York, N. Y.
Feed-Water Heater and Purifier and Oil Separator Combined.
 Blake & Knowles Steam Pump Works, New York, N. Y.
 Stewart Heater Co., Buffalo, N. Y.
Felt. (Building, Sheathing.)
 Barrett Mfg. Co., Philadelphia, Pa.
Fencing, Entrance Gates. (Iron, Steel, Wire.)
 Bolles Iron & Wire Works, J. E., Detroit, Mich.
 Dow Wire Works, Louisville, Ky.
 Dufur & Co., Baltimore, Md.
 New Jersey Wire Cloth Co., Trenton, N. J.
 Ohio Elevator & Mach. Co., The, Columbus, O.
Fertilizer Machy. (See also Phosphate Machy.)
 Campbell, P. F., Philadelphia, Pa.
 Valk & Murdoch Iron Works, Charleston, S. C.
 Walker & Elliott, Wilmington, Del.
 Wilmington Iron Works, Wilmington, N. C.
Files.
 Barnett Co., G. & H., Philadelphia, Pa.
 Delta File Works, Philadelphia, Pa.
 Nicholson File Co., Providence, R. I.
Filters. (Water, for Domestic and Industrial Purposes.)
 American Water Softener Co., Philadelphia, Pa.
 International Filter Co., Chicago, Ill.
 Linn Superior Co., The, Cincinnati, O.
 New York Con. Jewell Fil. Co., New York, N. Y.
 Roberts Filter Mfg. Co., Philadelphia, Pa.
 Seuffe & Sons Co., Wm. B., Pittsburg, Pa.
 Tucker & Laxton, Charlotte, N. C.
Fire Clay Brick. [See Brick, Fire Clay.]
Fire Box Blocks.
 Ashland Fire Brick Co., Ashland, Ky.
Fire Door Fixtures.
 Peters & Son, Jas., Philadelphia, Pa.
 Victor Mfg. Co., Newburyport, Mass.
Fire Extinguishers.
 Badger & Sons Co., E. B., Boston, Mass.
 General Fire Extinguisher Co., Providence, R. I.
Fire Escapes.
 Bolles Iron & Wire Works, J. E., Detroit, Mich.
 Chesapeake Iron Works, Baltimore, Md.
 Raquette Foundry & Supply Co., Massena, N. Y.
 Roanoke Iron Works, Inc., Roanoke, Va.
Fire Insurance.
 Hartford Fire Insurance Co., Hartford, Conn.
Fireproof Building Construction. (Steel.) [See Concrete Construction.]
Fireproof Building Material.
 Clinton Wire Cloth Co., Clinton, Mass.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Johns-Manville Co., H. W., New York, N. Y.
Fireproof Doors and Shutters.
 Dahlstrom Metallic Door Co., Jamestown, N. Y.
 Kinneer Mfg. Co., Columbus, O.
 New Orleans Roof & Metal Co., New Orleans, La.
 Richmond Safety Gate Co., Richmond, Ind.
 Victor Mfg. Co., Newburyport, Mass.
Fireproof Windows. [See Window Frames and Sashes (Fireproof).]
Fire Protection Hardware.
 Peters & Son, Jas., Philadelphia, Pa.
Flanges. (Iron and Steel.)
 American Cast Iron Pipe Co., Birmingham, Ala.
 American Pipe & Construction Co., Phila., Pa.
 American Spiral Pipe Works, Chicago, Ill.
 Cameron Steam Pump Wks., A. S., New York, N. Y.
 Dart Manufacturing Co., E. M., Providence, R. I.
 General Fire Extinguisher Co., Providence, R. I.
 Glamorgan Pipe & Foundry Co., Lynchburg, Va.
 National Tube Co., Pittsburg, Pa.
 U. S. Cast Iron Pipe & Fdy. Co., New York, N. Y.
 Whitlock Coil Pipe Co., Hartford, Conn.
 Wood & Co., B. D., Philadelphia, Pa.
Flare Lights. (Acetylene Gas.)
 U. S. Marine Signal Co., New York, N. Y.
Flexible Joints.
 Moran Flex. Steam Joint Co., Inc., Louisville, Ky.
Flooring. (Cement.)
 Dagostin & Angelini Bros., Montgomery, Ala.
Flooring. (Hardwood, Maple, Oak.)
 Carolina Portland Cement Co., Charleston, S. C.
 Northernmost Hardt Co., W. J., Memphis, Tenn.
 Nashville Mantel'd Flooring Co., Nashville, Tenn.
Flour and Grist Mill Machinery and Supplies.
 Caldwell & Sons Co., H. W., Chicago, Ill.
 Gibbs Machinery Co., Columbia, S. C.
 Nurdyke & Marmon Co., Indianapolis, Ind.
 Salem Foundry & Machine Works, Salem, Va.
 Starr Co., R. F., Baltimore, Md.
 Wolf Co., Chambersburg, Pa.
Flushtanks.
 Merritt & Co., Camden, N. J.
Foot Valves.
 Cameron Steam Pump Wks., A. S., New York, N. Y.
Forges.
 Buffalo Forge Co., Buffalo, N. Y.
 Sturtevant Co., B. F., Hyde Park, Mass.
Forgings.
 Richmond Forgings Corporation, Richmond, Va.
Forms. (Steel Collapsible.)
 Concrete Form & Engine Co., Detroit, Mich.
Foundations.
 Raymond Concrete Pile Co., New York, N. Y.
Foundations. (Open or Pneumatic.)
 Missouri Val. Bridge & Iron Co., Leavenworth, Kan.
Foundry Equipment and Supplies.
 Paxson Co., J. W., Philadelphia, Pa.
Frogs. [See Railroad Frogs and Switches.]
Fuel Economizer.
 Green Fuel Economizer Co., Matheuxan, N. Y.
 Sturtevant Co., B. F., Hyde Park, Mass.
Fuel Oil.
 Gulf Refining Co., Pittsburg, Pa.
 Indian Refining Co., Cincinnati, O.
 Texas Co., The, New York, N. Y.
Fuel Oil Equipment.
 Ingram Fuel Oil Burner Co., Newport News, Va.
 Petroleum Iron Works Co., Sharon, Pa.
Furnace Builders.
 Ritter-Conley Mfg. Co., Pittsburg, Pa.
Fuses, Bases and Fittings.
 Johns-Manville Co., H. W., New York, N. Y.
Galvanized Steel and Iron.
 American Sheet & Tin Plate Co., Pittsburg, Pa.
 J. C. H. Galvanizing Co., Philadelphia, Pa.
 La Belle Iron Works, Steubenville, O.
 McCalla, Harold, Philadelphia, Pa.
 New Orleans Roof & Metal Co., New Orleans, La.
 Wood Iron & Steel Co., Alan, Philadelphia, Pa.
 Youngstown Sheet & Tube Co., Youngstown, O.
Gas Blowers. (Turbine.)
 Terry Steam Turbine Co., New York, N. Y.
Gas Compressors.
 Blaisdell Machinery Co., Bradford, Pa.
 Ingersoll-Rand Co., New York, N. Y.
Gas Holders.
 Bartlett-Hayward Co., The, Baltimore, Md.
 Chicago Bridge & Iron Wks., Chicago, Ill.
Gas Machines.
 Economy Gas Mach. Co., Rochester, N. Y.
Gas Plants.
 Western Gas Construction Co., Ft. Wayne, Ind.
Gas Plants and Benches.
 Improved Equipment Co., New York, N. Y.
Gas Plants. (Coal and Water.)
 Bartlett-Hayward Co., The, Baltimore, Md.
Gas Producers.
 Bogart Gas Power Eng. Co., Buffalo, N. Y.
 De La Vergne Machine Co., New York, N. Y.
 Foss Gas Engine Co., The, Springfield, O.
 Gibbs Gas Engine Co., Atlanta, Ga.
 Improved Equipment Co., New York, N. Y.
 Westinghouse Machine Co., Pittsburg, Pa.
 Wood & Co., R. D., Philadelphia, Pa.
Gasoline and Kerosene.
 Gulf Refining Co., Pittsburg, Pa.
 Indian Refining Co., Cincinnati, O.
 Texas Co., The, New York, N. Y.
Gas and Steam Fitters' Tools.
 Saunders' Sons, D., Yonkers, N. Y.
Gaskets. (Rubber.)
 N. J. Car Spring & Rubber Co., Jersey City, N. J.
Gears.
 Caldwell & Sons Co., H. W., Louisville, Ky.
 Caldwell & Son Co., H. W., Chicago, Ill.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Earle Gear & Machine Co., The, Philadelphia, Pa.
 Great Southern Automobile Co., Birmingham, Ala.
 Jeffrey Mfg. Co., Columbus, O.
 Poole Engineering & Machine Co., Baltimore, Md.
 Positive Clutch & Pulley Works, Buffalo, N. Y.
 Trump Mfg. Co., Springfield, O.
Geologists.
 Clapp, Frederick C., Pittsburg, Pa.
 Froehling & Robertson, Richmond, Va.
Glass. (Plate, etc.)
 Binswanger & Co., Memphis, Tenn.
Governors.
 Pickering Governor Co., Portland, Conn.
Grain Elevator Supplies.
 Caldwell & Sons Co., H. W., Chicago, Ill.
 Dodge Manufacturing Co., Mishawaka, Ind.
 Jeffrey Mfg. Co., Columbus, O.
 Link-Belt Co., Nicetown (Philadelphia), Pa.
Granite.
 Harris Granite Quarries Co., Salisbury, N. C.
Graphite.
 Dixon Crucible Co., Joseph, Jersey City, N. J.
Grates and Grate Bars.
 Patch & Son Co., S. B., Streator, Ill.
 Thomas Grate Bar Co., Birmingham, Ala.
Gravel.
 Arundel Sand & Gravel Co., Baltimore, Md.
 Cassels Cement Gravel Co., Augusta, Ga.
Greases and Lubricating Compounds.
 Cook's Sons, Adam, New York, N. Y.
 Galena Signal Oil Co., Franklin, Pa.
 Indian Refining Co., Cincinnati, O.
 Robinson & Son Co., Wm. C., Baltimore, Md.
 Texas Co., The, New York, N. Y.
Grease and Oil Cups and Lubricators.
 Cook's Sons, Adam, New York, N. Y.
Grinders. (Gypsum, Limestone, etc.)
 Gardner Crusher Co., New York, N. Y.
 Williams Pat. Crusher & Pulv. Co., Chicago, Ill.
Grinding Wheels.
 Abrasive Material Co., Philadelphia, Pa.
 Carborundum Co., Niagara Falls, N. Y.
 Norton Co., Worcester, Mass.
 Vitified Wheel Co., Westfield, Mass.
Groovers.
 Hather Bros. Saw Mfg. Co., Rochester, N. Y.
Gunpowder.
 du Pont de Nemours Powder Co., E. I., Wilmington, Del.
Hammers. (Steam, Power, Pneumatic.)
 Chicago Pneumatic Tool Co., Chicago, Ill.
 Independent Pneumatic Tool Co., Chicago, Ill.
 Ingersoll-Rand Co., New York, N. Y.
Hand Elevators.
 Sidney Elevator Mfg. Co., Sidney, O.
Handle Machinery. [See Woodworking Machy.]
Hangers. [See Pulleys, Shafting and Hangers.]
Hauling Engines. (Steam Traction.)
 Case Threshing Mach. Co., J. I., Racine, Wis.
Hay Tools.
 Myers & Bro., F. E., Ashland, O.
Heater. (Portable, for Bituminous Pavements.)
 Ruggles-Coles Engineering Co., New York, N. Y.
Heating Apparatus, Engineers and Contractors.
 Buffalo Forge Co., Buffalo, N. Y.
 Monitor Steam Generator Mfg. Co., Balto., Md.
 Peck-Hammond Co., The, Cincinnati, O.
Hoisting Machinery.
 American Holst & Derrick Co., St. Paul, Minn.
 Brown Hoisting Mch. Co., Cleveland, O.
 Byers Machine Co., John F., Ravenna, O.
 Clyde Iron Works, Duluth, Minn.
 Contractors' Plant Mfg. Co., Ltd., Buffalo, N. Y.
 Duke Engine Co., Grand Haven, Mich.
 Exeter Machine Works, Pittston, Pa.
 Flory Mfg. Co., S., Bangor, Pa.
 Foss Gas Engine Co., The, Springfield, O.
 Hayward Co., New York, N. Y.
 Link-Belt Co., Nicetown (Philadelphia), Pa.

- Lands.**
Beller & Wilson, Bonnoire, Va.
Crosby, J. Edgar, New Orleans, La.
Fendley & Co., Albert, Brunswick, Ga.
Hatchison, H. B., Washington, D. C.
Kimbrough & Co., J. T., Atlanta, Ga.
Morris & Co., Abbott, Norfolk, Va.
Nesbaum & Co., S. L., Norfolk, Va.
- Lath.** (Expanded Metal.)
Carolina Portland Cement Co., Charleston, S. C.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Lathes.** (Engine.)
Greaves, Kinsman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Miami Valley Machine Tool Co., Dayton, O.
- Lawn Furniture.**
Boles Iron & Wire Works, J. E., Detroit, Mich.
Duff, Baggett & Co., Baltimore, Md.
- Leadite.**
Leadite Co., The, Philadelphia, Pa.
- Line.**
Carolina Portland Cement Co., Charleston, S. C.
Security Cement & Lime Co., Baltimore, Md.
Southern Lime & Cement Co., Charleston, S. C.
- Line.** (Hydrated.)
National Mortar & Supply Co., Pittsburg, Pa.
Security Cement & Lime Co., Baltimore, Md.
- Line Kilns and Equipment.**
Improved Equipment Co., New York, N. Y.
- Limestone Products.**
Security Cement & Lime Co., Baltimore, Md.
- Liquor Filters.**
International Filter Co., Chicago, Ill.
- Lithographers, Engravers.**
Young & Seiden Co., Baltimore, Md.
- Lockers.** (Metal.)
Kellogg Metal Ceiling Mfg. Co., S., Pittsburg, Pa.
- Locomotives.**
INDUSTRIAL.
American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Boren, Joseph E., Norfolk, Va.
Bryers Machine Co., John F., Havana, O.
Chas. Mfg. Co., Corry, Pa.
Davenport Locomotive Works, Davenport, Ia.
Jeffrey Mfg. Co., Columbus, O.
Lima Locomotive & Machine Co., Lima, O.
Miles Co., Cincinnati, O.
Purser Co., H. K., Pittsburg, Pa.
Valen Iron Works, Wilkes-Barre, Pa.
- RAILWAY.**
American Locomotive Co., New York, N. Y.
Baldwin Locomotive Works, The, Philadelphia, Pa.
Lima Locomotive & Machine Co., Lima, O.
Miles Co., Cincinnati, O.
Southern Supply Co., Norfolk, Va.
- Looms and Weaving Machinery.**
Draper & Co., Hopedale, Mass.
Mass Machine Works, Taunton, Mass.
- Lumber.**
Industrial Lumber Co., Elizabeth, La.
Massee & Felton Lumber Co., Macon, Ga.
- Lumber.** (Heavy Construction, Pitch Pine, etc.)
Massee & Felton Lumber Co., Macon, Ga.
National Lumber & Creosote Co., Texarkana, Ark.
Saylor & Co., S. E., Gulfport, Miss.
- Lumber.** (Yellow Pine.)
Industrial Lumber Co., Elizabeth, La.
- Lumber Buggies.**
Sole Steam Feed Works, Meridian, Miss.
- Lumber Stackers.**
Sole Steam Feed Works, Meridian, Miss.
- Machinery.** (Special.)
Black & Decker Mfg. Co., Baltimore, Md.
Bliss Co., E. W., Brooklyn, N. Y.
Great Southern Automobile Co., Birmingham, Ala.
Kline, Lewis T., Alpena, Mich.
Lester & Co., Charles, Brooklyn, N. Y.
Meyer, Chas. S., Columbia, Pa.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Rogersford Fdry. & Mach. Co., Wicks, Rogersford, Pa.
Stratton & Bragg Co., Petersburg, Va.
Universal Telegraphic Co., Baltimore, Md.
- Machinery and Supplies.** (New and Second-Hand Bargains.)
Bain, Iron, Steel & Metal Co., Baltimore, Md.
Bain, Metal Mchry. & Supply Co., Baltimore, Md.
Griggs Machinery Co., Pittsburg, Pa.
Campbell, Thos. J., Philadelphia, Pa.
Chicago House Wrecking Co., Chicago, Ill.
Cleveland Belting & Machinery Co., Cleveland, O.
Denver Railway Equipment Co., Chicago, Ill.
Frank & S. Co., Ernest T., Baltimore, Md.
Hittner's Sons Co., Henry A., Philadelphia, Pa.
Huston, R. C., Memphis, Tenn.
Huntington Mchry. & Sup. Co., Wilkes-Barre, Pa.
Ide Bros. & Co., New York, N. Y.
Leeman, Charles T., Birmingham, Ala.
Levine & Co., E., Philadelphia, Pa.
Linton, W. J., New York, N. Y.
Lodge & Shipley Machine Tool Co., Cincinnati, O.
Marine Metal & Supply Co., New York, N. Y.
Moran, Richard, Baltimore, Md.
Sole Mach. Co., Ft. Wayne, Ind.
Stall, J., Philadelphia, Pa.
Spaworth, H. M., New York, N. Y.
Mannheimer Engineering Co., Chicago, Ill.
Pittsburg Mchry. & Equip. Co., Pittsburg, Pa.
Prentiss Tool & Supply Co., New York, N. Y.
Randle Machinery Co., Cincinnati, O.
Read Co., Howard W., Philadelphia, Pa.
Rhodes Railway Equipment Co., New York, N. Y.
Samuel, Frank, Philadelphia, Pa.
Savage Co., W. J., Knoxville, Tenn.
Seifer's Sons, Inc., L. F., Philadelphia, Pa.
Southern Supply Co., Norfolk, Va.
South Norfolk Lumber Corp., Norfolk, Va.
Stewart Co., Paul, Cincinnati, O.
Tampa Machinery Exchange, Tampa, Fla.
Tenn Supply Co., Beaumont, Tex.
Thompson, Jr., Co., Jos. H., New York, N. Y.
Toomey, Frank, Philadelphia, Pa.
Wicks Bros., New York, N. Y.
Winter, Herman L., Philadelphia, Pa.
Turney, Thomas, Philadelphia, Pa.
- Machine Tools.**
Greaves, Kinsman & Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Miami Valley Machine Tool Co., Dayton, O.
- Machinists.** (Engineers.)
American Mch. & Mfg. Co., Charlotte, N. C.
Roanoke Iron Works, Inc., Roanoke, Va.
Stratton & Bragg Co., Petersburg, Va.
- Magnesia Materials.**
Johns-Manville Co., H. W., New York, N. Y.
- Magnesite.** (Dead Burned.)
Harrison-Walker Refractories Co., Pittsburg, Pa.
- Magnets.** (Electric Lift.)
Browning Engineering Co., Cleveland, O.
- Magnet Electro.** (For Cottonseed, Linters and Hullers.)
Dixie Electro Magnet Co., Memphis, Tenn.
- Magnetic Separators.**
Paxson Co., J. W., Philadelphia, Pa.
- Mail Chutes.**
Cutler Mail Chute Co., Rochester, N. Y.
- Mantels.** (Wooden.)
Northcross Mantel Co., W. J., Memphis, Tenn.
- Marble Work.** (Interior.)
Dagostin & Angell Bros., Montgomery, Ala.
Southern Mosaic Tile Co., Birmingham, Ala.
- Mechanical Draft.**
American Blower Co., Detroit, Mich.
Buffalo Steam Pump Co., Buffalo, N. Y.
Garden City Fan Co., Chicago, Ill.
Sturtevant Co., B. F., Hyde Park, Mass.
- Metal Ceilings.** [See Ceilings, Metal.]
- Metaline.**
North Amer. Metaline Co., Long Island City, N. Y.
- Metal Culverts.** [See Culverts.] (Corrugated Metal.)
- Metal Polish.**
Hoffman, Geo. W., Indianapolis, Ind.
- Metal Shingles.**
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cortright Metal Roofing Co., Philadelphia, Pa.
Edwards Manufacturing Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
- Metal Window Frames and Sashes.**
Edwards Mfg. Co., The, Cincinnati, O.
Kellogg Metal Cell. & Mfg. Co., S., Pittsburg, Pa.
Voigtman & Co., Chicago, Ill.
- Metal Work.** (Stamped and Embossed Hotel Cheeks, Key Tags, etc.)
American Railway Supply Co., New York, N. Y.
- Metal-Working Machinery.**
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Gibbs Machinery Co., Columbia, S. C.
Lester & Co., Chas., Brooklyn, N. Y.
Price Machinery Co., S. M., Norfolk, Va.
Rogersford Fdry. & Mach. Co., Rogersford, Pa.
- Meters.** (Water, Sewage, etc.)
Builders' Iron Fdy. Co., Providence, R. I.
- Milk Filters.** (Liquor, Milk, etc.)
International Filter Co., Chicago, Ill.
- Mill Engineers and Architects.**
Lockwood, Greene & Co., Boston, Mass.
Stirring, J. E., Greenville, S. C.
Sohle, Edward, Charlotte, N. C.
- Mill Supplies.**
Appomattox Iron Works, Petersburg, Va.
Bailley-Lobby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Gainesville Iron Works, Gainesville, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Lombard Iron Works, Augusta, Ga.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Mecklenburg Iron Works, Charlotte, N. C.
Nurdyke & Marmon Co., Indianapolis, Ind.
Salem Foundry & Machine Works, Salem, Va.
Smith-Courtney Co., Richmond, Va.
Starr Co., B. F., Baltimore, Md.
Stratton & Bragg Co., Petersburg, Va.
Wolf Co., Chambersburg, Pa.
- Mining Machinery.** (Gold, Copper, Plate, etc.)
Bartlett & Snow Co., C. O., Cleveland, O.
Jeffrey Mfg. Co., Columbus, O.
McLanahan Stone Mach. Co., Hollidaysburg, Pa.
Mecklenburg Iron Works, Charlotte, N. C.
Power & Mining Machinery Co., Cudahy, Wis.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
- Mixing Machinery.**
Dunning, W. D., Syracuse, N. Y.
Lynn Superior Co., The, Cincinnati, O.
- Mold.** (Cement.)
Simpson Cement Mold Co., Columbus, O.
- Mortar Colors.**
Chattanooga Paint Co., Chattanooga, Tenn.
- Mouldings, Casings, etc.**
Massee & Felton Lumber Co., Macon, Ga.
- Nails and Spikes.**
Hoffman & Co., R. C., Baltimore, Md.
Lebanon Valley Iron & Steel Co., Lebanon, Pa.
Republic Iron & Steel Co., Pittsburg, Pa.
West Virginia Rail Co., The, Huntington, W. Va.
Youngstown Sheet & Tube Co., Youngstown, O.
- Nitre Pots, Eggs.**
Pratt Engineering & Mach. Co., Atlanta, Ga.
- Nuts.** [See Bolts, Nuts, Rivets, etc.]
- Office Furniture.**
Quincy Show Case Works, Quincy, Ill.
Ruse & Thompson, Baltimore, Md.
- Oils.** (Lubricating, etc.)
Borne-Schrymer Co., New York, N. Y.
Gleason Signal Oil Co., Franklin, Pa.
Gulf Refining Co., Pittsburg, Pa.
Indian Refining Co., Cincinnati, O.
Robinson & Son Co., Wm. C., Baltimore, Md.
Texas Co., The, New York, N. Y.
- Oil-Burning Appliances.**
Ingram Fuel Oil Burner Co., Newport News, Va.
Petroleum Iron Works Co., Sharon, Pa.
- Oil Cans.**
Wall Mfg. Supply Co., P., Allegheny, Pa.
- Oil Separators.**
Stewart Heater Co., Buffalo, N. Y.
- Oil Stones.**
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
- Oil-Storage Systems.**
Hydraulic Oil Storage Co. of Maryland, Baltimore, Md.
- Oil-Well Machinery.**
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
Williams Bros., Ithaca, N. Y.
- Ornamental Iron Work.**
Bartlett-Hayward Co., The, Baltimore, Md.
Belmont Iron Works, Inc., Philadelphia, Pa.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chesapeake Iron Works, Baltimore, Md.
Dow Wire Works Co., Louisville, Ky.
Ohio Elevator Machine Co., The, Columbus, O.
Roanoke Iron Works, Inc., Roanoke, Va.
Schreiber & Sons Co., The, L., Cincinnati, O.
Snead Architectural Iron Works, Louisville, Ky.
- Packing.** (Asbestos, Metallic, Rubber, Leather, etc.)
Jenkins Bros., New York, N. Y.
Johns-Manville Co., H. W., New York, N. Y.
N. J. Car Spring & Rubber Co., Jersey City, N. J.
Power Specialty Co., New York, N. Y.
- Paint.** (Bridge.)
Dixon Crucible Co., Jos., Jersey City, N. J.
National Roofing Co., Tonawanda, N. Y.
- Paints.** (Cold Water.)
Wilhelm Co., A., New York, N. Y.
- Paint.** (Roofing, Building, etc.)
Armstrong Mfg. Co., The, Richmond, Va.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Carolina Portland Cement Co., Charleston, S. C.
Chattanooga Paint Co., Chattanooga, Tenn.
Dixon Crucible Co., Jos., Jersey City, N. J.
Glidden Varnish Co., Cleveland, O.
National Roofing Co., Tonawanda, N. Y.
Standard Paint Co., New York, N. Y.
Wilhelm Co., A., New York, N. Y.
- Paint.** (Metal Preservative.)
National Roofing Co., Tonawanda, N. Y.
Wilhelm Co., A., New York, N. Y.
- Paint-making Machinery.**
Campbell, P. F., Philadelphia, Pa.
Lynn Superior Co., The, Cincinnati, O.
- Paper.** (Roofing, Building, Sheathing, etc.)
Armstrong Mfg. Co., The, Richmond, Va.
Barrett Mfg. Co., Philadelphia, Pa.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Southern Lime & Cement Co., Charleston, S. C.
- Paraffine Wax.**
Standard Oil Co., Inc., Cincinnati, O.
- Patent Attorneys.**
Brown, Eugene C., Washington, D. C.
Chandler & Co., H. Ellis, Washington, D. C.
Chandler & Chandler, Washington, D. C.
Evans & Co., Victor J., Washington, D. C.
Hamlin, Geo. R., Washington, D. C.
Lacey, R. S. & A. B., Washington, D. C.
Owen, Richard B., Washington, D. C.
- Patterns.**
Roanoke Iron Works, Inc., Roanoke, Va.
- Pavement Filler.**
Barrett Mfg. Co., Philadelphia, Pa.
- Paving.** (Contractors for Creamed Wood Block.)
Creamed Wood Block Paving Co., Gulfport, Miss.
- Paving.** (Road and Street, etc.)
Barber Asphalt Paving Co., Philadelphia, Pa.
Southern Clay Mfg. Co., Chattanooga, Tenn.
- Paving Blocks.** (Granite.)
Harris Granite Quarries Co., Salisbury, N. C.
- Paving Blocks.** (Wood Crev-Resinate.)
Gulport Creosoting Co., Gulfport, Miss.
Southern Wood Preserving Co., Atlanta, Ga.
U. S. Wood Preserving Co., New York, N. Y.
- Paving Brick.**
Carlyle Paving Brick Co., Portsmouth, O.
Copeland-Ingalls Shale Brick Co., Birm'gh'm, Ala.
Southern Clay Mfg. Co., Chattanooga, Tenn.
- Perforated Metal.**
Caldwell & Son, H. W., Chicago, Ill.
Clinton Wire Cloth Co., Clinton, Mass.
Erdle Perforating Co., Rochester, N. Y.
Heudrick Mfg. Co., The, Carbondale, Pa.
Mundt & Sons, Charles, Jersey City, N. J.
- Perspectives.** (Water Color, for Architects.)
Alger & Smith, Atlanta, Ga.
- Petroleum Refiners.**
Gulf Refining Co., Pittsburg, Pa.
Indian Refining Co., Cincinnati, O.
Standard Oil Co., Cincinnati, O.
- Phosphate Machinery.**
Alding Engineering Co., J. R., New York, N. Y.
American Process Co., New York, N. Y.
Bailley-Lobby Co., The, Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Link-Belt Co., Newtown (Philadelphia), Pa.
McLanahan Stone Mach. Co., Hollidaysburg, Pa.
Pratt Engineering & Mach. Co., Atlanta, Ga.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Valk & Murdock Iron Works, Charleston, S. C.
Walker & Elliott, Wilmington, Del.
- Phosphor-Bronze.** (Wire Rods, Sheets.)
Phosphor-Bronze Smelting Co., Philadelphia, Pa.
- Photo-Engravers.**
Baltimore-Maryland Eng. Co., Baltimore, Md.
- Pig Iron.**
Alabama Coal & Iron Co., Birmingham, Ala.
Hammond-Byrd Co., The, Birmingham, Ala.
Hickman, Williams & Co., Chicago, Ill.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Pittsburg, Pa.
Rogers, Brown & Co., Cincinnati, O.
Tennessee Coal, Iron & R. R. Co., B'm'gh'm, Ala.
- Pile Drivers.**
Browning Engineering Co., Cleveland, O.
Bucyrus Co., The, Milwaukee, Wis.
Vulcan Iron Works, Chicago, Ill.
- Piling.** (Concrete.)
Raymond Concrete Pile Co., New York, N. Y.
- Piling.** (Creosoted.)
Gulport Creosoting Co., Gulfport, Miss.
Intern'l Creosoting & Const. Co., Galveston, Tex.
Southern Creosoting Co., Ltd., Slidell, La.
- Pillow Blocks.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Dodge Manufacturing Co., Milwaukee, Ind.
Golden's Foundry & Machine Co., Columbus, Ga.
- Pine Tar.**
Atlantic Turpentine Co., Savannah, Ga.
- Pipe.** (Cast Iron.)
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Construction Co., Phila., Pa.
General Fire Extinguisher Co., Providence, R. I.
Glanorgan Pipe & Foundry Co., Lynchburg, Va.
McWane Pipe Works, Lynchburg, Va.
U. S. Cast Iron Pipe & Fdry. Co., New York, N. Y.
Wood & Co., R. D., Philadelphia, Pa.
- Pipe.** (Coil.)
Columbus Iron Works Co., Columbus, Ga.
Frick Co., The, Waynesboro, Pa.
National Pipe Bending Co., New Haven, Conn.
Whitlock Coil Pipe Co., Hartford, Conn.
Wolf Co., Fred W., Chicago, Ill.
York Mfg. Co., York, Pa.
- Pipe.** (Corrugated Culvert.)
American Rolling Mill Co., Middletown, O.
Canton Culvert Co., The, Canton, O.
Dixie Culvert & Metal Co., Atlanta, Ga.
Kentucky Culvert Mfg. Co., Rueschel, Ky.
North Carolina Metal Culv. Co., Greensboro, N. C.
Virginia Metal Culvert Co., Roanoke, Va.
Virginia Railway Supply Co., Norfolk, Va.
- Pipe.** (Riveted.)
Abendroth & Root Mfg. Co., Newburgh, N. Y.
Keefer Co., E., Williamsport, Pa.
Petroleum Iron Works Co., Sharon, Pa.
- Pipe.** (Spiral Riveted.)
Abendroth & Root Mfg. Co., Newburgh, N. Y.
American Spiral Pipe Works, Chicago, Ill.
- Pipe.** (Wood.)
Wyckoff & Son Co., A., Elmira, N. Y.
- Pipe.** (Wrought.)
General Fire Extinguisher Co., Providence, R. I.
La Belle Iron Works, Steubenville, O.
National Tube Co., Pittsburg, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
- Pipe Bends.**
Columbus Iron Works Co., Columbus, Ga.
Whitlock Coil Pipe Co., Hartford, Conn.
- Pipe Covering.** (Steam.)
Johns-Manville Co., H. W., New York, N. Y.
Wyckoff & Son Co., A., Elmira, N. Y.
- Pipe Cutting and Threading Machinery.**
Saunders' Sons, D., Yonkers, N. Y.
- Pipe Fittings.**
American Cast Iron Pipe Co., Birmingham, Ala.
Columbus Iron Works Co., Columbus, Ga.
General Fire Extinguisher Co., Providence, R. I.
Wolf Co., Fred W., Chicago, Ill.
York Mfg. Co., York, Pa.
- Pipe Jointing.** (Gas and Water Main.)
Leadite Co., The, Philadelphia, Pa.
- Pipe Unions and Joints.**
Part Mfg. Co., E. M., Providence, R. I.
National Tube Co., Pittsburg, Pa.
Whitlock Coil Pipe Co., Hartford, Conn.
- Pipe Wrenches and Cutters.**
Saunders' Sons, D., Yonkers, N. Y.
- Pitch.**
Barrett Mfg. Co., Philadelphia, Pa.
- Planers.** (Metal.)
Manning, Maxwell & Moore, Inc., New York, N. Y.
- Planing Mill Work.**
Massee & Felton Lumber Co., Macon, Ga.
- Plaster of Paris.**
King & Co., J. B., New York, N. Y.
- Plaster.**
Security Cement & Lime Co., Baltimore, Md.
- Plaster.** (Asbestos Cement, Plaster of Paris.)
King & Co., J. B., New York, N. Y.
- Plaster Boards.**
Kip & Co., J. B., New York, N. Y.
Plaster Products Co., Hampton, Va.
- Plaster Machinery.**
Bartlett & Snow Co., C. O., Cleveland, O.
- Plates.**
Cincinnati Iron & Steel Co., Cincinnati, O.
- Pneumatic Tools.** [See Tools—Pneumatic.]
- Poles.** (Transmission Line; Steel.)
Ritter-Conley Mfg. Co., Pittsburg, Pa.
- Polishing Machinery.** (Wheels and Blocks.)
Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Springfield Tire & Rubber Co., Springfield, O.
Vitrified Wheel Co., Westfield, Mass.
- Power Transmission Machinery.**
Bailley-Lobby Co., Charleston, S. C.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Dayton Globe Iron Works Co., Dayton, O.
Dodge Manufacturing Co., Milwaukee, Ind.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Langhlin Steel Co., Pittsburg, Pa.
Lane Mfg. Co., Montpelier, Vt.
Link-Belt Co., Newtown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.
Nurdyke & Marmon Co., Indianapolis, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Price Machinery Co., S. M., Norfolk, Va.
Scholfield's Sons Co., J. R., Macon, Ga.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Presses.** (Rolling, Cottonseed Oil, etc., Hydraulic and Power.)
Boomer & Roschert Press Co., Syracuse, N. Y.
Cardwell Machine Co., Richmond, Va.
Continental Gln Co., Birmingham, Ala.
Gibbs Machinery Co., Columbia, S. C.
- Presses.** (Stamping.)
Bliss Co., E. W., Brooklyn, N. Y.
Lester & Co., Charles, Brooklyn, N. Y.
- Preventive for Sap Stain.**
Church & Dwight Co., New York, N. Y.

- Printers.** (Book, Catalog, Job, etc.)
Fleet-McGinley Co., Baltimore, Md.
- Protector Steel.** (Concrete Curb, Steps, etc.)
Steel Protected Concrete Co., Philadelphia, Pa.
- Pulleys.** (Friction Clutch.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Sincal-Scott Co., Baltimore, Md.
Woods' Sons Co., T. B., Chambersburg, Pa.
- STEEL SPLIT.**
American Pulley Co., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.
- WOOD SPLIT.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Lane Mfg. Co., Montpelier, Vt.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Saginaw Mfg. Co., Saginaw, Mich.
Salem Foundry & Machine Works, Salem, Va.
- Pulleys, Shafting and Hangers.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., I. & E., Cincinnati, O.
Jeffrey Mfg. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittsburg, Pa.
Lane Mfg. Co., Montpelier, Vt.
Link-Belt Co., Nictown (Philadelphia), Pa.
Nortyke & Marmon Co., Indianapolis, Ind.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Standard Roller Bearing Co., Philadelphia, Pa.
Woods' Sons Co., T. B., Chambersburg, Pa.
- Pumps.** (Centrifugal.)
Alberger Pump Co., New York, N. Y.
Buffalo Steam Pump Co., Buffalo, N. Y.
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Erie Pump & Engine Works, Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
Morris Machine Works, Baldwinville, N. Y.
Wheeler Condenser & Eng. Co., New York, N. Y.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.
- Pumps.** (Hydraulic.)
Buffalo Steam Pump Co., Buffalo, N. Y.
Cardwell Machine Co., Richmond, Va.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Emerson Steam Pump Co., Alexandria, Va.
Erie Pump & Engine Wks., Erie, Pa.
Goulds Mfg. Co., Seneca Falls, N. Y.
Worthington, H. R., New York, N. Y.
- Pumps.** (Lift and Force.)
Goulds Mfg. Co., Seneca Falls, N. Y.
Ingersoll-Rand Co., New York, N. Y.
- Pumps.** (Odorous and Excavating.)
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps.** (Pneumatic.)
Ingersoll-Rand Co., New York, N. Y.
- Pumps.** (Power Boiler Feed.)
Alberger Pump Co., New York, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
McGowan Co., John H., Cincinnati, O.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Murray Iron Works Co., Burlington, Ia.
Myers & Bros., F. E., Ashland, O.
Union Steam Pump Co., Battle Creek, Mich.
Worthington, H. R., New York, N. Y.
- Pumps.** (Rotary.)
Goulds Mfg. Co., Seneca Falls, N. Y.
McGowan Co., John H., Cincinnati, O.
- Pumps.** (Steam.)
Blakeslee Mfg. Co., Du Quoin, Ill.
Buffalo Steam Pump Co., Buffalo, N. Y.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cameron & Barkley Co., Charleston, S. C.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Deane Steam Pump Co., Holyoke, Mass.
Fairbanks, Morse & Co., Chicago, Ill.
Gibbs Machinery Co., Columbus, S. C.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hooven, Owen, Rentschler Co., Hamilton, O.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
McGowan Co., John H., Cincinnati, O.
Murray Iron Works Co., Burlington, Ia.
Price Machinery Co., S. M., Norfolk, Va.
Sydnor Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Wheeler Condenser & Eng. Co., New York, N. Y.
Worthington, H. R., New York, N. Y.
- Pumps.** (Trench.)
Goulds Mfg. Co., Seneca Falls, N. Y.
- Pumps.** (Vacuum.)
Alberger Pump Co., New York, N. Y.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Goulds Mfg. Co., Seneca Falls, N. Y.
Union Steam Pump Co., Battle Creek, Mich.
Wheeler Condenser & Eng. Co., New York, N. Y.
- Pumping Machinery.**
Allis-Chalmers Co., Milwaukee, Wis.
Blakeslee Mfg. Co., Du Quoin, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indianapolis, Ind.
Deane Steam Pump Co., Holyoke, Mass.
Deming Co., Salem, O.
Erie Pump & Engine Works, Erie, Pa.
Fairbanks, Morse & Co., Chicago, Ill.
Goulds Mfg. Co., Seneca Falls, N. Y.
Hooven, Owen, Rentschler Co., Hamilton, O.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
Moffatt Machinery Mfg. Co., Charlotte, N. C.
Morris Machine Works, Baldwinville, N. Y.
Myers & Bros., F. E., Ashland, O.
Purser, J. R., Charlotte, N. C.
Sanitary Pump Co., Dayton, O.
Sydnor Pump & Well Co., Richmond, Va.
Union Steam Pump Co., Battle Creek, Mich.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.
- Punching and Shearing Machinery.**
Bertsch & Co., Cambridge City, Ind.
Bliss Co., E. W., Brooklyn, N. Y.
Royersford Foundry & Mach. Co., Royersford, Pa.
- Pyrites Burners.**
Pratt Engineering & Mach. Co., Atlanta, Ga.
- Quarrying and Stonecutting Machinery.**
Ingersoll-Rand Co., New York, N. Y.
- Railroads.** (Agricultural and Industrial Opportunities.)
Illinois Central Railroad, Chicago, Ill.
- Railroads.** (Passenger Department.)
Illinois Central Railroad, Chicago, Ill.
- Railroad Equipment and Supplies.** (New and Second-hand.)
American Frog & Switch Co., Hamilton, O.
American Locomotive Co., New York, N. Y.
American Valve & Meter Co., Cincinnati, O.
Bailey-Leiby Co., The, Charleston, S. C.
Baldwin Equipment & Supply Co., Chicago, Ill.
Birmingham Rail & Loco. Co., Birmingham, Ala.
Cincinnati Frog & Switch Co., Cincinnati, O.
Fairbanks, Morse & Co., Chicago, Ill.
Foster Co., L. R., Pittsburg, Pa.
Frank, M. K., Pittsburg, Pa.
Georgia Car & Locomotive Co., Atlanta, Ga.
Hoffman & Co., R. C., Baltimore, Md.
Kilby Frog & Switch Co., Birmingham, Ala.
Maclean, J. H., Suffolk, Va.
Males Co., Cincinnati, O.
Manning, Maxwell & Moore, Inc., New York, N. Y.
Maryland Equipment & Supply Co., Baltimore, Md.
May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Read Co., Howard W., Philadelphia, Pa.
Robinson & Orr, Pittsburg, Pa.
Sherwood, E. C., New York, N. Y.
Smith-Courtney Co., Richmond, Va.
Southern Iron & Equipment Co., Atlanta, Ga.
Southern Supply Co., Norfolk, Va.
Steel Rail Supply Co., The, New York, N. Y.
United States Rail Co., Cumberland, Md.
Vulcan Iron Works, Wilkes-Barre, Pa.
Weir Frog Co., Cincinnati, O.
West Virginia Rail Co., The, Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
Zelicker Supply Co., Walter A., St. Louis, Mo.
- Railroad Frogs and Switches.**
American Frog & Switch Co., Hamilton, O.
Cincinnati Frog & Switch Co., Cincinnati, O.
Hoffman & Co., R. C., Baltimore, Md.
Kilby Frog & Switch Co., Birmingham, Ala.
May & Turner Co., Atlanta, Ga.
Robinson & Orr, Pittsburg, Pa.
Sweet's Steel Co., Williamsport, Pa.
Weir Frog Co., Cincinnati, O.
- Railways and Power Plants, Electric.** (Organized and Financed.)
Wheaton, E. F., Henderson, Ky.
- Rails.** (Steel.)
Baldwin Equipment & Supply Co., Chicago, Ill.
Carnegie Steel Co., Pittsburg, Pa.
Foster Co., L. R., Pittsburg, Pa.
Frank, M. K., Pittsburg, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Hunt Co., C. W., West New Brighton, N. Y.
Hyde Bros. & Co., Pittsburg, Pa.
Levis & Co., Henry, Philadelphia, Pa.
Maclean, J. H., Suffolk, Va.
May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Republiron & Steel Co., Pittsburg, Pa.
Richardson & Co., Inc., Pittsburg, Pa.
Robinson & Orr, Pittsburg, Pa.
Sherwood, E. C., New York, N. Y.
Southern Iron & Equipment Co., Atlanta, Ga.
Steel Rail Supply Co., The, New York, N. Y.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & R. R. Co., B'ham, Ala.
United States Rail Co., Cumberland, Md.
West Virginia Rail Co., The, Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
Zelicker Supply Co., Walter A., St. Louis, Mo.
- Rail Braces, Crossings, etc.** (See R. R. Frogs and Switches.)
- Railways.** (Industrial.)
Chase Fdry. & Mfg. Co., Columbus, O.
Hunt Co., C. W., West New Brighton, N. Y.
Link-Belt Co., Nictown (Philadelphia), Pa.
- Rams.** (Hydraulic.) (See Hydraulic Rams.)
- Reamers.**
Morse Twist Drill & Mach. Co., New Bedford, Mass.
- Reinforcing Bars.**
Carnegie Steel Co., Pittsburg, Pa.
Concrete Steel Co., New York, N. Y.
Concrete Steel Engineering Co., New York, N. Y.
Franklin Steel Co., Franklin, Pa.
- Repairs.** (Power Plants.)
Strickland Mch. Co., Richmond, Va.
- Riveters.** (Pneumatic.)
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Road Machinery.**
Austin-Western Co., Ltd., The, Chicago, Ill.
Buffalo Steam Roller Co., Buffalo, N. Y.
Case Threshing Mach. Co., J. I., Racine, Wis.
Huber Mfg. Co., The, Marion, O.
Iroquois Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Kilbourne & Jacobs Mfg. Co., Columbus, O.
Syracuse Chilled Plow Co., Syracuse, N. Y.
Universal Road Mch. Co., Kingston, N. Y.
- Roadmaking Materials.**
Barber Asphalt Paving Co., Philadelphia, Pa.
Standard Oil Co., Inc., Road Oil Dept.
Texas Co., The, New York, N. Y.
- Road Roller.** (Steam.)
Austin-Western Co., Ltd., The, Chicago, Ill.
Buffalo Steam Roller Co., Buffalo, N. Y.
Case Threshing Mach. Co., J. I., Racine, Wis.
Huber Mfg. Co., The, Marion, O.
Iroquois Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Universal Road Mch. Co., Kingston, N. Y.
- Road Oil.**
Gulf Refining Co., Pittsburg, Pa.
Standard Oil Co., Inc., Road Oil Dept.
Texas Co., The, New York, N. Y.
- Road Plows.**
Case Threshing Mach. Co., J. I., Racine, Wis.
Syracuse Chilled Plow Co., St. Louis, Mo.
- Road Preservative.**
Gulf Refining Co., Pittsburg, Pa.
Standard Oil Co., Inc., Road Oil Dept.
Texas Co., The, New York, N. Y.
- Rock Crushers.** (See Crushers, Rock.)
- Rolls.** (Bending and Straightening.)
Bertsch & Co., Cambridge City, Ind.
- Roofers' and Tinners' Supplies.**
Merchant & Evans Co., Philadelphia, Pa.
- Roofing.** (Felt, Tar, Asbestos, Asphalt, Tin, etc.)
Allen, Herbert F. L., Washington, D. C.
American Sheet & Tin Plate Co., Pittsburg, Pa.
Armstrong Mfg. Co., Richmond, Va.
Barber Asphalt Paving Co., Philadelphia, Pa.
Brenneman & Seaman Co., Chicago, Ill.
Bird & Son, F. W., East Walpole, Mass.
Cameron & Barkley Co., Charleston, S. C.
Carolina Portland Cement Co., Charleston, S. C.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
- Johns-Manville Co., H. W., New York, N. Y.**
National Roofing Co., Tonawanda, N. Y.
Standard Paint Co., New York, N. Y.
Warren-Ehret Co., Philadelphia, Pa.
- Roofing.** (Cement.)
Carey Mfg. Co., Philad., Cincinnati, O.
- Roofing.** (Metal Shingles.) (See Shingles, Metal.)
- Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.**
Cartright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Roofing.** (Reinforced Concrete.)
Clinton Wire Cloth Co., Clinton, Mass.
- Roofing.** (Slate.)
East Bangor Consol. Slate Co., East Bangor, Pa.
Galt & Sons, John, New York, N. Y.
Genuine Bangor Slate Co., Easton, Pa.
Hower, J. K., Slattington, Pa.
Johnson, E. J., New York, N. Y.
- Roofing and Siding.** (Bird Sand and Chipped Slate Surfaced.)
Berningham & Seaman Co., Chicago, Ill.
- Roofing and Siding.** (Flexible Cement, Bur-lap Inserted.)
Berningham & Seaman Co., Chicago, Ill.
- Roofing and Siding.** (Metal.)
American Rolling Mill Co., Middletown, O.
American Sheet & Tin Plate Co., Pittsburg, Pa.
Cameron & Barkley Co., Charleston, S. C.
Cartright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., The, Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Orleans Rfg. & Metal Wks., New Orleans, La.
Tennessee Metal Culvert Co., Nashville, Tenn.
Youngstown Sheet & Tube Co., Youngstown, O.
- Rope.**
American Mfg. Co., New York, N. Y.
Broderick & Bascom Rope Co., St. Louis, Mo.
Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.
- Rope.** (Transmission and Hoisting.)
American Mfg. Co., New York, N. Y.
Broderick & Bascom Rope Co., St. Louis, Mo.
Caldwell Co., Inc., W. E., Louisville, Ky.
Columbian Rope Co., Auburn, N. Y.
Dodge Manufacturing Co., Mishawaka, Ind.
Hunt Co., C. W., West New Brighton, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Whitlock Cordage Co., New York, N. Y.
Woods' Sons Co., T. B., Chambersburg, Pa.
- Rope Drives.**
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son, H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Jones & Laughlin Steel Co., Pittsburg, Pa.
Wood's Sons Co., T. B., Chambersburg, Pa.
- Rope Machinery.**
Haskell-Dawes Machine Co., Boston, Mass.
- Rubber Goods.**
Eureka Fire Hose Mfg. Co., New York, N. Y.
New Jersey Car Sp'g & Rub. Co., Jersey City, N. J.
- Rules.** (Steel.)
Lufkin Rule Co., The, Saginaw, Mich.
Starrett Co., L. S., Athol, Mass.
- Safes and Vaults.**
York Safe & Lock Co., York, Pa.
- Safety Appliance.** (For Elevator.)
Roth Elevator Safety Co., Inc., Baltimore, Md.
- Sand.**
Arundel Sand & Gravel Co., Baltimore, Md.
Cassia Cement Gravel Co., Augusta, Ga.
Kirkpatrick Sand & Cem. Co., Birmingham, Ala.
- Sand Lime Brick Machinery.**
American Clay Machinery Co., The, Bucyrus, O.
- Sand Rammers.**
Chicago Pneumatic Tool Co., Chicago, Ill.
- Sand.** (White, for Glass and Steel Plants.)
Clinch Mountain Flint & Spar Co., Bristol, Tenn.
- Sap Stain Preventive.**
Church & Dwight Co., New York, N. Y.
- Sash Chain.**
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
- Saws.**
Gibbs Machinery Co., Columbia, S. C.
Huther Bros. Saw Mfg. Co., Rochester, N. Y.
Smith Machine Co., H. B., Smithville, N. J.
Sydnor Pump & Well Co., Richmond, Va.
- Saws.** (Band.)
Smith Machine Co., H. B., Smithville, N. J.
- Saws.** (Hack.)
Starrett Co., L. S., Athol, Mass.
- Sawmill Dogs.**
Soule Steam Feed Works, Meridian, Miss.
- Sawmills.**
Appomattox Iron Works, Petersburg, Va.
Gainesville Iron Works, Gainesville, Va.
Vance & Co., J. A., Salem, N. C.
- Sawmill Machinery.**
Bailey-Leiby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Chase Turbine Mfg. Co., Orange, Mass.
Gibbs Machinery Co., Columbia, S. C.
Lane Mfg. Co., Montpelier, Vt.
Mecklenburg Iron Works, Charlotte, N. C.
Price Mch. Co., S. M., Norfolk, Va.
Schofield's Sons Co., J. S., Macon, Ga.
Southern Engine & Boiler Works, Jackson, Tenn.
Sydnor Pump & Well Co., Richmond, Va.
Union Iron Works Co., Selma, Ala.
Vance & Co., J. A., Salem, N. C.
- Saw Sharpeners.**
Abrasive Material Co., Philadelphia, Pa.
Carborandum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Saw Sharpeners and Files.** (Cotton Gin.)
Carver Cotton Gin Co., East Bridgewater, Mass.
- Scales.**
Horse Scale Co., New York, N. Y.
Rome Scale & Mfg. Co., Rome, Ga.
Standard Scale & Supply Co., Pittsburg, Pa.
- Screening Apparatus.**
Walker & Elliott, Wilmington, Del.
- Screens.** (Fly, Window and Door.)
New Jersey Wire Cloth Co., Trenton, N. J.
- Screens.** (Mining.)
Clinton Wire Cloth Co., Clinton, Mass.
Erdle Perforating Co., Rochester, N. Y.
Hendrick Mfg. Co., Carbonada, Pa.
Jeffrey Mfg. Co., Columbus, O.
New Jersey Wire Cloth Co., Trenton, N. J.
Mundt & Sons, Charles, Jersey City, N. J.
McLannan-Stone Mach. Co., Hollidaysburg, Pa.
Symons Bros., Milwaukee, Wis.
- Searchlights.**
Ft. Wayne Electric Works, Ft. Wayne, Ind.
- Separators.** (Dust.)
Buffalo Forge Co., Buffalo, N. Y.
Raymond Bros. Impact Pulv. Co., Chicago, Ill.
Savannah Blow Pipe Co., Savannah, Ga.
Skinner Bros., St. Louis, Mo.
- Sewer Pipe Machinery.**
American Clay Machinery Co., The, Bucyrus, O.
Taplin-Rice-Clerkin Co., Akron, O.
- Sewer Pipe.** (Vitrified.)
Carolina Portland Cement Co., Charleston, S. C.
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens Sons Co., H., Macon, Ga.
- Shafting.** (Polished Steel.)
Field & Co., Inc., Philadelphia, Pa.
Jones & Laughlin Steel Co., Pittsburg, Pa.
Republiron & Steel Co., Pittsburg, Pa.
- Shafting Boxes.**
Hyatt Roller Bearing Co., Newark, N. J.
- Shafting.** (See Pulleys, Shafting and Hangers.)
- Sharpening Stones.**
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.
- Shears.** (Metal.)
Royersford Fdry. & Mach. Co., Royersford, Pa.
- Sheet Brass and Copper.**
Hussey & Co., C. G., Pittsburg, Pa.
Merchant & Evans Co., Philadelphia, Pa.
- Sheet Metal Working Machinery.**
Bliss Co., E. W., Brooklyn, N. Y.
- Sheet Piling.** (Concrete.)
Raymond Concrete Pile Co., New York, N. Y.
- Sheet Steel and Iron.**
Allegheny Steel Co., Pittsburg, Pa.
American Rolling Mill Co., Middletown, O.
American Sheet & Tin Plate Co., Pittsburg, Pa.
Cincinnati Iron & Steel Co., Cincinnati, O.
La Belle Iron Works, Steubenville, O.
Republiron & Steel Co., Pittsburg, Pa.
Tennessee Coal, Iron & R. R. Co., B'ham, Ala.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
Youngstown Sheet & Tube Co., The, Youngstown, O.
- Shingles.** (Metal.)
Carolina Portland Cement Co., Charleston, S. C.
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Cartright Metal Roofing Co., Philadelphia, Pa.
Edwards Mfg. Co., Cincinnati, O.
Hyndman Roofing Co., Cincinnati, O.
Milwaukee Corrugating Co., Milwaukee, Wis.
- Shipping Tags.**
Dennison Mfg. Co., Boston, Mass.
- Shovels.** (R. R. Contractors' Fdry., Mill, etc.)
Texas Handle Co., Houston, Tex.
- Shredders.** (Bark, Chip, etc.)
Williams Pat. Crush. & Pul. Co., The, Chicago, Ill.
- Shutters.** (Iron.)
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Chasapeake Iron Works, Baltimore, Md.
- Shutters.** (Steel Rolling.)
Kinneair Mfg. Co., Columbus, O.
- Shutters.** (Tin Clad.)
Victor Mfg. Co., Newburyport, Mass.
- Siding and Roofing.** (Bird Sand and Chipped Slate Surfaced.)
Berningham & Seaman Co., Chicago, Ill.
- Signs.** (Metal Lithographed.)
Southern Can Co., Baltimore, Md.
- Skylights and Cornices.**
Milwaukee Corrugating Co., Milwaukee, Wis.
New Orleans Rfg. & Metal Wks., New Orleans, La.
- Slate.** (Structural, Sanitary, etc.)
Carolina Portland Cement Co., Charleston, S. C.
East Bangor Consol. Slate Co., East Bangor, Pa.
Genuine Bangor Slate Co., Easton, Pa.
Hower, J. K., Slattington, Pa.
- Slaters' Tools.**
Galt & Sons, John, New York, N. Y.
- Sluice Gates and Appliances.**
Coldwell-Wilcox Co., Newburgh, N. Y.
- Smokestacks.** (Iron and Steel.)
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Keeler Co., E., Williamsport, Pa.
Lombard Iron Works, Augusta, Ga.
Petroleum Iron Works Co., Sharon, Pa.
Schofield's Sons Co., J. S., Macon, Ga.
Virginia Bridge & Iron Co., Roanoke, Va.
- Smokestacks.** (Steel-Concrete.)
Weber Chimney Co., Chicago, Ill.
- Spikes.** [See Nails and Spikes.]
- Spiral Stairs.**
Raquette Foundry & Supply Co., Massena, N. Y.
- Springs.** (Machinery, Railway, Spiral.)
Cary Spring Works, New York, N. Y.
Raymond Mfg. Co., Ltd., Corry, Pa.
- Sprinklers.** (Automatic.)
General Fire Extinguisher Co., Providence, R. I.
- Stamp Mills.**
Mecklenburg Iron Works, Charlotte, N. C.
- Stamps.** (Brass, Rubber.)
Bennett Rubber Stamp & Seal Co., Atlanta, Ga.
Dixie Seal & Stamp Co., Atlanta, Ga.
- Standpipes.**
Chattanooga Boiler & Tank Co., Chat'n'ga, Tenn.
Walker & Elliott & Iron Wks., Chicago, Ill.
Hartley Boiler Works, Montgomery, Ala.
Keeler Co., E., Williamsport, Pa.
Petroleum Iron Works Co., Sharon, Pa.

- Stapling Machinery.** (Fruit Package Basket, etc.)
Saratoga Machine Co., St. Joseph, Mich.
- Stationers.** (Envelopes, etc.)
Young & Selden Co., Baltimore, Md.
- Steam Feeds.**
Boile Steam Feed Works, Meridian, Miss.
- Steam Fitters' Supplies.**
General Fire Extinguisher Co., Providence, R. I.
Sauders' Sons, D., Yonkers, N. Y.
- Steam Heating.**
General Fire Extinguisher Co., Providence, R. I.
Keeler Co., E., Williamsport, Pa.
Peck-Hammond Co., The, Cincinnati, O.
- Steamship Lines.**
Baltimore Steam Packet Co., Baltimore, Md.
Chesapeake Steamship Co., Baltimore, Md.
Merchant & Miners' Trans. Co., Baltimore, Md.
- Steam Separators.**
Hoppe Mfg. Co., Springfield, O.
Lindstrom's Mach. Wks., John T., Allentown, Pa.
- Steam Shovels.** [See Excavating Machinery.]
- Steam Shovels.** (Revolving.)
Browning Engineering Co., Cleveland, O.
- Steam Specialties.**
Powell Co., Wm., Cincinnati, O.
Purser, J. R., Charlotte, N. C.
- Steam Traps.**
American Blower Co., Detroit, Mich.
Jenkins Bros., New York, N. Y.
Lindstrom's Mach. Wks., John T., Allentown, Pa.
- Steel.**
American Rolling Mill Co., Middletown, O.
Carnegie Steel Co., Pittsburgh, Pa.
Field & Co., Inc., Philadelphia, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Lambert Iron Works, Lebanon, Pa.
La Belle Iron Works, Steubenville, O.
Republic Iron & Steel Co., Pittsburgh, Pa.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
Wood Iron & Steel Co., Alan, Philadelphia, Pa.
- Steels.** (Tool.)
Field & Co., Inc., Philadelphia, Pa.
Jesse's Sons Steel Sales Co., Wm., St. Louis, Mo.
- Steel.** (Vanadium.)
American Vanadium Co., Pittsburgh, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
- Steel Buildings.** (Designers, Builders.)
American Bridge Co. of New York, New York, N. Y.
Baltimore Bridge Co., Baltimore, Md.
Bartlett-Hayward Co., The, Baltimore, Md.
Chesapeake Iron Works, Baltimore, Md.
Chicago Bridge & Iron Wks., Chicago, Ill.
Parris Bridge Co., Pittsburgh, Pa.
Missouri Valley Bridge & Iron Co., Leavenworth, Kans.
Morris, Wheeler & Co., Philadelphia, Pa.
Phoenix Iron Co., Philadelphia, Pa.
Ritter-Conley Mfg. Co., Pittsburgh, Pa.
Roanoke Bridge Co., Roanoke, Va.
Schneider & Sons Co., The, Cincinnati, O.
Sued Architectural Iron Works, Louisville, Ky.
Virginia Bridge & Iron Co., Roanoke, Va.
- Steel Casting.**
Crescent Steel Castings Co., Lansdowne, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Reliance Steel Casting Co., Pittsburgh, Pa.
Riverside Steel Casting Co., Newark, N. J.
- Steel Plate Work.**
Bartlett-Hayward Co., The, Baltimore, Md.
Case-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
Hoffman & Co., R. C., Baltimore, Md.
Phoenix Iron Co., Philadelphia, Pa.
Republic Iron & Steel Co., Pittsburgh, Pa.
Ritter-Conley Mfg. Co., Pittsburgh, Pa.
- Steel Protector.** (Concrete Curb Steps, etc.)
[See Protector Steel.]
- Steel Sheet Piling.**
Carnegie Steel Co., Pittsburgh, Pa.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
- Steering Gears.** (Steamboat.)
Dake Engine Co., Grand Haven, Mich.
- Stencils.**
Baltimore Office Supply Co., Baltimore, Md.
Dixie Seal & Stamp Co., Atlanta, Ga.
- Stirrups.** (Building.)
Chesapeake Iron Works, Baltimore, Md.
- Stock Certificates, Bonds and Seals.**
Baltimore Office Supply Co., Baltimore, Md.
Dixie Seal & Stamp Co., Atlanta, Ga.
- Stokers.** (Mechanical.)
Babcock & Wilcox Co., New York, N. Y.
Harrisburg Fdry. & Mach. Works, Harrisburg, Pa.
Westinghouse Machine Co., Pittsburgh, Pa.
- Storage Batteries.**
Lee Electric Co., Baltimore, Md.
Elec. Storage Battery Co., The, Philadelphia, Pa.
Westinghouse Machine Co., Pittsburgh, Pa.
- Strainers.**
Cameron Steam Pump Wks., A. S., New York, N. Y.
- Structural Steel and Iron.**
American Bridge Co. of New York, New York, N. Y.
Baltimore Bridge Co., Baltimore, Md.
Bartlett-Hayward Co., The, Baltimore, Md.
Belmont Iron Works, Inc., Philadelphia, Pa.
Carnegie Steel Co., Pittsburgh, Pa.
Chesapeake Iron Works, Baltimore, Md.
Chicago Bridge & Iron Wks., Chicago, Ill.
Cincinnati Iron & Steel Co., Cincinnati, O.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Hoffman & Co., R. C., Baltimore, Md.
Jones & Laughlin Steel Co., Pittsburgh, Pa.
Missouri Valley Bridge & Iron Co., Leavenworth, Kans.
Morris, Wheeler & Co., Philadelphia, Pa.
Oregon Bridge Co., New York, N. Y.
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Republic Iron & Steel Co., Pittsburgh, Pa.
Ritter-Conley Mfg. Co., Pittsburgh, Pa.
Roanoke Bridge Co., Roanoke, Va.
Roanoke Iron Works, Inc., Roanoke, Va.
Schneider & Sons Co., The, Cincinnati, O.
Sued Architectural Iron Works, Louisville, Ky.
Tennessee Coal, Iron & R. R. Co., Birmingham, Ala.
Virginia Bridge & Iron Co., Roanoke, Va.
York Bridge Co., York, Pa.
- Stump Pullers.**
Zimmerman Steel Co., M. R., Lone Tree, Ia.
- Sugar-Mill Machinery.**
Pruitt Engineering & Mach. Co., Atlanta, Ga.
- Sulphur.**
Union Sulphur Co., New York, N. Y.
- Super-Heaters.** (Steam.)
Babcock & Wilcox Co., New York, N. Y.
Power Specialty Co., New York, N. Y.
- Surveying Instruments.**
Keuffel & Esser, Hoboken, N. J.
- Switchboards, Switches, etc.**
Doubleday-Hill Electric Co., Pittsburgh, Pa.
Engberg's Elect. & Mech. Works, St. Joseph, Mo.
Fort Wayne Electric Works, Atlanta, Ga.
General Electric Co., Schenectady, N. Y.
Westinghouse Electric & Mfg. Co., Pittsburgh, Pa.
- Switches.** [See Railroad Frogs and Switches.]
- Switchstands.**
American Valve & Meter Co., Cincinnati, O.
Weir Frog Co., Cincinnati, O.
- Tackle Blocks.** (For Wire or Manila Rope.)
Patterson Co., W. W., Pittsburgh, Pa.
- Tags.**
Dennison Mfg. Co., Boston, Mass.
- Tanks.** (Iron and Steel.)
American Water Softener Co., Philadelphia, Pa.
Bartlett-Hayward Co., The, Baltimore, Md.
Caldwell Co., Inc., W. E., Louisville, Ky.
Case Threshing Mch. Co., J. L., Racine, Wis.
Case-Hedges Co., Chattanooga, Tenn.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
Cole Mfg. Co., R. D., Newman, Ga.
Des Moines Bridge & Iron Co., Des Moines, Ia.
Harry Bros. Co., Dallas, Tex.
Harley Boiler Works, Montgomery, Ala.
Keeler Co., E., Williamsport, Pa.
Kennett Co., Chicago Heights, Ill.
Lombard Iron Works, Augusta, Ga.
Lookout Boiler & Mfg. Co., Chattanooga, Tenn.
New Orleans Rfg. & Metal Wks., New Orleans, La.
Petroleum Iron Works Co., Sharon, Pa.
Ritter-Conley Mfg. Co., Pittsburgh, Pa.
Seafie & Sons Co., Wm. B., Pittsburgh, Pa.
Scholfield's Sons Co., J. S., Macon, Ga.
Sydney Pump & Well Co., Richmond, Va.
Tennessee Metal Culvert Co., Nashville, Tenn.
Virginia Bridge & Iron Co., Roanoke, Va.
Walsh & Weldner Boiler Co., Chattanooga, Tenn.
- Tanks.** (Wood.)
Baltimore Cooperage Co., Baltimore, Md.
Caldwell Co., Inc., W. E., Louisville, Ky.
Davis & Son, G. M., Palatka, Fla.
Sydney Pump & Well Co., Richmond, Va.
- Tapes.** (Measuring.)
Keuffel & Esser, Hoboken, N. J.
Larkin Rule Co., Saginaw, Mich.
Starrett Co., L. S., Athol, Mass.
Weber & Co., F., Philadelphia, Pa.
- Telephones.** (Supplies, Equipment.)
Doubleday-Hill Electric Co., Pittsburgh, Pa.
Lee Electric Co., Baltimore, Md.
Piedmont Electric Co., Asheville, N. C.
Western Electric Co., New York, N. Y.
- Telephone Cable.**
Western Electric Co., New York, N. Y.
- Telephone Poles.** [See Crossies.]
Western Electric Co., New York, N. Y.
- Terra-cotta.**
Atlanta Terra-Cotta Co., East Point, Ga.
Birch & Co., C., Atlanta, Ga.
Maryland Terra-Cotta Co., Baltimore, Md.
Pomona Terra-Cotta Co., Pomona, N. C.
Southern Building Material Co., Norfolk, Va.
Stevens' Sons Co., H., Macon, Ga.
- Threshers.**
Cardwell Machine Co., Richmond, Va.
Case Threshing Mch. Co., J. L., Racine, Wis.
- Tie Plates.** (Railways.)
Virginia Railway Supply Co., Norfolk, Va.
- Tile.** (Drain, Floor, etc.)
Oconee Brick & Tile Co., Milledgeville, Ga.
- Tile.** (Mosaic.)
Dagostin & Angelini Bros., Montgomery, Ala.
Southern Mosaic Tile Co., Birmingham, Ala.
- Tin and Terne Plates.**
American Sheet & Tin Plate Co., Pittsburgh, Pa.
Merchant & Evans Co., Philadelphia, Pa.
- Tobacco Machinery.**
Buckeye Iron & Brass Works, Dayton, O.
Cardwell Machine Co., Richmond, Va.
- Tool Steels.**
Jesse's Sons Steel Sales Co., Wm., St. Louis, Mo.
- Tools.** (Mechanists.)
Manning, Maxwell & Moore, Inc., New York, N. Y.
Morse Twist Drill & Mch. Co., New Bedford, Mass.
- Tools.** (Pneumatic.)
American Compressor & Pump Co., Baltimore, Md.
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Torches.** (Acetylene Gas.)
U. S. Marine Signal Co., New York, N. Y.
- Torches.**
Wall Mfg. Supply Co., P., Allegheny, Pa.
- Towers.** (Steel and Wood.)
Baltimore Cooperage Co., Baltimore, Md.
Caldwell Co., Inc., Wm. E., Louisville, Ky.
Chattanooga Boiler & Tank Co., Chattanooga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
Cole Mfg. Co., R. D., Newman, Ga.
Des Moines Bridge & Iron Co., Des Moines, Ia.
- Traction Engines.**
Case Threshing Mch. Co., J. L., Racine, Wis.
Huber Mfg. Co., Marion, O.
- Tramway.** (Overhead.)
Northern Engineering Works, Detroit, Mich.
Speidel, J. G., Reading, Pa.
- Tramway.** (Wire Rope.)
Broderick & Bascom Rope Co., St. Louis, Mo.
Caldwell & Sons Co., H. W., Chicago, Ill.
Link-Belt Co., Nictown (Philadelphia), Pa.
- Transformers.**
Crocker-Wheeler Co., Ampere, N. J.
Mooney Electric Co., St. Louis, Mo.
Triumph Electric Co., Cincinnati, O.
- Trench Excavator.**
American Steel Dredge Co., Ft. Wayne, Ind.
Fairbanks Steam Shovel Co., Marion, O.
Monaghan Machine Co., Chicago, Ill.
- Trucks.** (Platform, Freight, Mill, Factory, etc.)
Clark Co., Geo. F., Windsor Locks, Conn.
Howe Scale Co., New York, N. Y.
Kilbourne & Jacobs Mfg. Co., Columbus, O.
Rome Scale & Mfg. Co., Rome, Ga.
- Trucks.** (Storage Battery Auto.)
Westinghouse Machine Co., Pittsburgh, Pa.
- Trucks.** (Wood and Steel for Portable Machinery.)
Electric Wheel Co., Quincy, Ill.
- Trust Companies.** [See Bankers and Brokers.]
- Tube Well Strainers.**
Cook Well Co., St. Louis, Mo.
- Tubes.** (Boiler.)
Allegheny Steel Co., Pittsburgh, Pa.
Cincinnati Iron & Steel Co., Cincinnati, O.
National Tube Co., Pittsburgh, Pa.
- Tubing.**
Field & Co., Inc., Philadelphia, Pa.
La Belle Iron Works, Steubenville, O.
National Tube Co., Pittsburgh, Pa.
Youngstown Sheet & Tube Co., The, Youngstown, O.
- Turbines.** (Hydraulic.)
Allis-Chalmers Co., Milwaukee, Wis.
Davis Foundry & Machine Works, Rome, Ga.
Dayton Globe Iron Works Co., Dayton, O.
Lefell & Co., James, Springfield, O.
Pope Engineering & Mach. Co., Baltimore, Md.
Smith Co., S. Morgan, York, Pa.
Trump Mfg. Co., Springfield, O.
- Turbines.** (Steam.)
Allis-Chalmers Co., Milwaukee, Wis.
De Laval Steam Turbine Co., Trenton, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Ft. Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Schenectady, N. Y.
Southwick Fdry. & Mch. Co., Philadelphia, Pa.
Terry Steam Turbine Co., New York, N. Y.
Wagner Electric Mfg. Co., St. Louis, Mo.
Westinghouse Machine Co., Pittsburgh, Pa.
- Turbine Condensers.**
Wheeler Condenser & Eng. Co., New York, N. Y.
- Turntables.**
Baltimore Bridge Co., Baltimore, Md.
Virginia Bridge & Iron Co., Roanoke, Va.
- Turpentine.**
Atlantic Turpentine Co., Savannah, Ga.
- Twine.**
American Manufacturing Co., New York, N. Y.
Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.
- Twine Machinery.**
Haskell-Dawes Machine Co., Boston, Mass.
- Twisting Machinery.**
Haskell-Dawes Machine Co., Boston, Mass.
- Unions.**
Dart Manufacturing Co., E. M., Providence, R. I.
- Vacuum Cleaning Apparatus.**
Blaisdell Machinery Co., Bradford, Pa.
Duntley Mfg. Co., Chicago, Ill.
- Valves.**
Bourbon Copper & Brass Wks. Co., Cincinnati, O.
Columbian Iron Works, Chattanooga, Tenn.
Frick Co., The, Waynesboro, Pa.
General Fire Extinguisher Co., Providence, R. I.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
Jenkins Bros., New York, N. Y.
National Tube Co., Pittsburgh, Pa.
Powell Co., Wm., Cincinnati, O.
Wolf & Co., Fred W., Chicago, Ill.
York Mfg. Co., York, Pa.
- Varnish.**
Berry Bros., Ltd., Detroit, Mich.
Glidden Varnish Co., Cleveland, O.
- Veneer Machines.**
Titus, E. E., Petersburg, Va.
- Ventilating Apparatus.** (Engineers' and Contractors.)
American Blower Co., Detroit, Mich.
Blaisdell Machinery Co., Bradford, Pa.
Buffalo Forge Co., Buffalo, N. Y.
Clark Co., Geo. F., Windsor Locks, Conn.
Garden City Fan Co., Chicago, Ill.
Peck-Hammond Co., Cincinnati, O.
Sturtevant Co., E. F., Hyde Park, Mass.
- Ventilators.**
Merchant & Evans Co., Philadelphia, Pa.
- Wagons.** (Dump.)
Eagle Wagon Works, Auburn, N. Y.
Troy Wagon Works Co., Troy, O.
- Wall Plugs.** (Galvanized.)
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
- Wall Ties.**
Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.
- Wage Woven Wire Fence Co., Adrain, Mich.**
- Warehouse, Bonded.** (For Manufacturers.)
Candler Warehouse Co., Atlanta, Ga.
- Washers.** (Ore and Phosphate.)
Bailey-Lobby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.
- Washers and Rivets.** [See Bolts, Nuts, Rivets, Studs and Washers.]
- Washers.** (Water Power for Clothes.)
Bates & Bro. Co., D. L., Dayton, O.
- Water Filters.** [See Filters, Water, for Domestic and Industrial Purposes.]
- Waterfront Structures.** (Concrete.)
Raymond Concrete Pile Co., New York, N. Y.
- Water Meters.**
American Valve & Meter Co., Cincinnati, O.
- Waterproofing.** (For Brick Work.)
Barrett Mfg. Co., Philadelphia, Pa.
Carolina Portland Cement Co., Charleston, S. C.
National Roofing Co., Tonawanda, N. Y.
- Waterproofing.** (For Concrete.)
Barrett Mfg. Co., Philadelphia, Pa.
McMurrick Waterproof Portland Cement Co., St. Louis, Mo.
National Roofing Co., Tonawanda, N. Y.
- Waterproof Compound.** (Liquid.)
Carolina Portland Cement Co., Charleston, S. C.
McMurrick Waterproof Portland Cement Co., St. Louis, Mo.
National Roofing Co., Tonawanda, N. Y.
- Water-Softening Apparatus.** (Purifying.)
American Water Softener Co., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.
Kennett Co., Chicago Heights, Ill.
N. Y. Cont. Jewell Filtration Co., New York, N. Y.
Roberts Filter Mfg. Co., Philadelphia, Pa.
Seafie & Sons Co., Wm. B., Pittsburgh, Pa.
Tucker & Laxton, Charlotte, N. C.
- Water Supply Systems.** (Town, Home, Railroad, etc.)
Rife Engine Co., New York, N. Y.
- Water-Wheels.** [See Turbines. (Hydraulic).]
- Water-Works Supplies and Appliances.**
American Cast Iron Pipe Co., Birmingham, Ala.
American Pipe & Constr. Co., Philadelphia, Pa.
Bourbon Copper & Brass Wks. Co., Cincinnati, O.
Coldwell-Wilcox Co., Newburgh, N. Y.
Columbian Iron Works, Chattanooga, Tenn.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
Leadbite Co., The, Philadelphia, Pa.
McWane Pipe Works, Lynchburg, Va.
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens' Sons Co., H., Macon, Ga.
U. S. Cast Iron Pipe & Fdry. Co., New York, N. Y.
- Weather.** (Recording Liquid.)
Worthington, Henry R., New York, N. Y.
- Well Contractors.** (Oil, Artesian, etc.)
Cook Well Co., The, St. Louis, Mo.
Harper, Henry W., Danielsville, Pa.
Hughes Specialty Well Drill Co., Charleston, S. C.
Sydney Pump & Well Co., Richmond, Va.
- Well Tools and Supplies.**
Cook Well Co., The, St. Louis, Mo.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
Williams Bros., Ithaca, N. Y.
- Wheels and Axles.**
Electric Wheel Co., Quincy, Ill.
Oliver Mfg. Co., W. J., Knoxville, Tenn.
- Wheelbarrows and Trucks.**
Kilbourne & Jacobs Mfg. Co., Columbus, O.
Syracuse Chilled Plow Co., Syracuse, N. Y.
- Wheels.** (Steel and Steel Tired.)
Carnegie Steel Co., Pittsburgh, Pa.
- Window Frames and Sashes.** (Fireproof.)
Detroit Steel Products Co., Detroit, Mich.
Volgtmann & Co., Chicago, Ill.
- Window Guards.** (Wire.) [See Wire Goods.]
- Windmills.**
Baltimore Cooperage Co., Baltimore, Md.
Caldwell Co., Inc., W. E., Louisville, Ky.
- Wire Insulating.**
General Electric Co., Schenectady, N. Y.
- Wire.** (Barbed Wire, etc.)
American Steel & Wire Co., Chicago, Ill.
Roebling's Sons Co., J. A., Trenton, N. J.
Youngstown Sheet & Tube Co., Youngstown, O.
- Wire Cloth.** (Iron, Steel, Brass, etc.)
Caldwell & Sons Co., The, H. W., Chicago, Ill.
Clinton Wire Cloth Co., Clinton, Mass.
Diamond Wire Products Co., Columbus, O.
Estey Wire Works Co., New York, N. Y.
Meyers Mfg. Co., Fred J., Hamilton, O.
New Jersey Wire Cloth Co., Trenton, N. J.
Wight & Co., W. N., New York, N. Y.
- Wire Goods.**
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Buckeye Wire & Iron Works Co., Columbus, O.
Diamond Wire Products Co., Columbus, O.
Dow Wire Works Co., Louisville, Ky.
Dufur & Co., Baltimore, Md.
Dufur, Baggett & Co., Baltimore, Md.
Estey Wire Works Co., New York, N. Y.
Jones & Co., L. E., Baltimore, Md.
Meyers Mfg. Co., The Fred J., Hamilton, O.
New Jersey Wire Cloth Co., Trenton, N. J.
- Wire Netting.**
New Jersey Wire Cloth Co., Trenton, N. J.
- Wire Rope.**
American Steel & Wire Co., Chicago, Ill.
Broderick & Bascom Rope Co., St. Louis, Mo.
Contractors' Plant Mfg. Co., Inc., Buffalo, N. Y.
Roebling's Sons Co., J. A., Trenton, N. J.
Williamsport Wire Rope Co., Williamsport, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.
- Wire Rope Clips.**
American Hoist & Derrick Co., St. Paul, Minn.
- Wire Rope Thimbles.**
American Hoist & Derrick Co., St. Paul, Minn.
Broderick & Bascom Rope Co., St. Louis, Mo.
- Wood Blocks.** (For Paving and Factory Floors.)
U. S. Wood Preserving Co., New York, N. Y.
- Woodboring Machines.**
Chicago Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.
- Wood-Fiber Plaster.**
King & Co., J. B., New York, N. Y.
- Wood Pipe.** (For Water, etc.)
Wyckoff & Son Co., A., Elmira, N. Y.
- Wood Plaster.**
King & Co., J. B., New York, N. Y.
- Wood Preserver.**
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- Woodworking Machinery.**
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Lane Mfg. Co., Montpelier, Vt.
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Oliver Mfg. Co., Cuyahoga Falls, O.
Oliver & Sons, Samuel J., Milton, Pa.
Smith-Courtney Co., Richmond, Va.
Smith Machine Co., H. B., Smithville, N. J.
Wilmington Iron Works, Wilmington, N. C.
Vance & Co., J. A., Salem, N. C.
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Columbian Rope Co., Auburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
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Ads. marked * appear every other week.
Ads. marked † appear in first issue of the month.
Ads. marked ‡ not in this issue.

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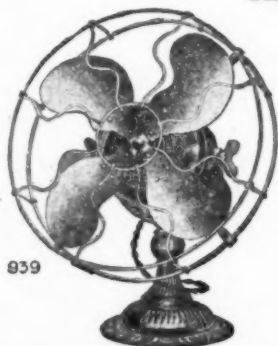
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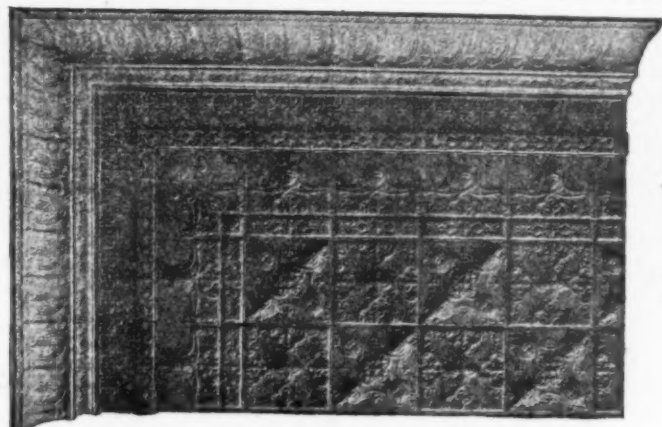


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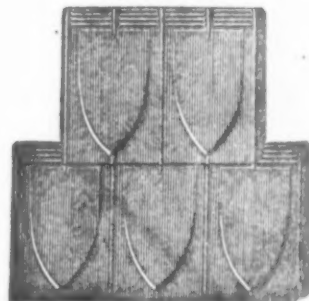


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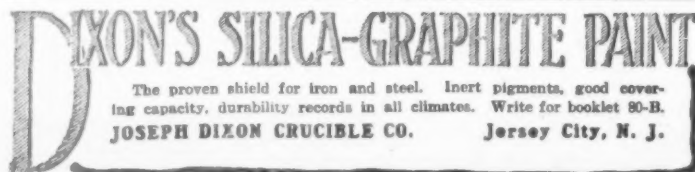


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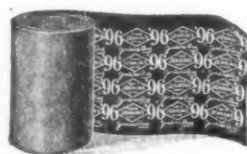
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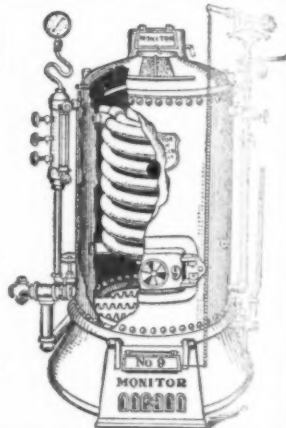
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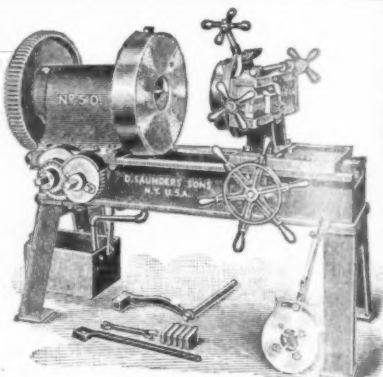
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